

SCHOOL ACTIVITIES AND COMMUNITY PROGRAMS AS CONTEXTS FOR  
ADOLESCENT SELF-INTEGRATION, SOCIAL CONNECTION,  
AND WELL-BEING: THE ROLE OF PARTICIPANT CHARACTERISTICS, KEY  
FEATURES OF ACTIVITY PARTICIPATION, AND ENGAGEMENT IN  
REFLECTIVE PRACTICES

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Nicole Michele Ja

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SCHOOL ACTIVITIES AND COMMUNITY PROGRAMS AS CONTEXTS FOR  
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Nicole Michele Ja, Ph.D.

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Organized school activities and community programs have the potential to provide key supports and opportunities for youth, especially for low-income youth who are in the greatest need of additional supports (Furstenberg et al., 1999). Calls have been made to identify potential mechanisms of development that link activity participation to youth outcomes. The extent to which youth are autonomously motivated about participating in their activity, in other words, how self-determined they are in regulating their behavior (Deci & Ryan, 2002), may be one such mechanism. There are three key features of activity participation that may promote autonomous motivation: the type of activity a young person participates in (e.g., sports vs. academic clubs), connectedness to adults in their program, and the duration or length of their participation. In addition, engagement in reflective practices may assist youth in drawing out the meaning embedded in their activity experiences, thus enhancing autonomous motivation.

The Afterschool Community Empowerment (ACE) Project was conducted in the fall of 2009 with 1198 students (56% White, 31% Black/Hispanic/Latino, and 40%

participating in the free/reduced lunch program) attending Binghamton High School in Binghamton, New York. A school-wide paper-pencil survey including an activity participation inventory and items measuring youth outcomes was used to collect self-report data. Current activity participants (72% of total sample) also answered questions about program processes and proximal outcomes.

Overall results from this investigation showed that: a) there was a higher proportion of high SES youth who reported more favorable outcomes (e.g., well-being) among activity participants vs. non-participants, b) youth with different characteristics (e.g., gender) differed in the types of activities they participate in, how connected they feel to adults, and their participation duration (e.g., high SES White youth and boys had greater odds of participating in sports), c) participation in sports and performing and fine arts programs were associated with significantly higher autonomous motivation vs. academic clubs and faith-based/community programs, d) connectedness to adults in programs is the activity participation feature with the strongest positive relationship to autonomous motivation (parental support moderates this relationship), e) youth who reported high connectedness and longer duration reported the highest autonomous motivation, f) autonomous motivation was shown to be positively associated with three of six indicators of well-being (i.e., life satisfaction, positive affect, psychological resilience), g) six reflective patterns about program experiences were identified, and certain participant characteristics were associated with greater odds of engagement in a particular reflective pattern, and h) youth who engage in a moderate, well-balanced set of reflective practices (vs. are not reflective at all, for example) report significantly higher autonomous motivation. Implications for policy and practice, the limitations of this study, and recommendations for future research are discussed.

## BIOGRAPHICAL SKETCH

Nicole Ja was born and raised in the San Francisco Bay Area where she graduated from the University of California at Berkeley with a Bachelor of Arts in Psychology and English Literature in 2000. Nicole went on to earn her M.A. in Developmental Psychology from the Department of Human Development at Cornell University in 2007. Drawing upon her own experiences as a competitive tennis player at the national, state, and university level, as a community and youth activist during her time in Berkeley, and as a teacher, coach, and counselor for young people in multiple learning contexts, Nicole has continued to follow her passion for maximizing the capacity of creative after-school contexts in unlocking adolescents' inherent potential for growth and thriving. She is particularly interested in understanding how adolescents' engagement in self-reflection about their activity experiences may serve as rich opportunities for promoting youth voice, engagement, authenticity, personal expression, and social connection.

*To my parents, of course.*  
*And to all of my angels, here and beyond.*

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## CHAPTER 1

### Introduction

#### *School Activities and Community Programs as Contexts for Development*

The requirements for adaptation are particularly important during adolescence, a time when young people are experiencing major physical, cognitive, and social transitions that occur within the multiple and dynamic contexts in which youth live (Gestsdottir & Lerner, 2008). One approach to understanding the development of young people is through the Positive Youth Development (PYD) framework, of which one guiding premise is that all youth have the strengths, talents, and interests that will help them thrive, develop a sense of well-being, and create a positive future (Damon, 2004; Larson, 2000; Lerner, Dowling, & Anderson, 2003). The PYD framework is linked with *developmental systems theory*, which highlights person-in-context relations for developing wellness and thriving (Lerner, 2004; Lerner & Benson, 2003; Lerner et al., 2003).

While Lerner, Theokas, and Jellicic (2005) emphasize adolescents' "capacity to act as active participants in community structure, function, and change, and thus act as positive agents in their own successful development" (p. 33), the realization of that potential also depends on the selection of adaptive options that are available for intentional action on the part of adolescents (Heckhausen, 1999). In other words, although young people have the capacity to actively engage in their own development, we must consider the ways in which the surrounding context support or restrict adolescents' capacity for growth and thriving.

Youth growing up in communities with different resources and opportunities are known to experience systematically different courses of development (Furstenberg et al., 1999). Low-income children are faced with greater challenges to successful adaption as they experience more frequent exposure to stress domains (e.g., violence,

family turmoil), greater intensity of stress exposure, and greater cumulative, multiple stressors compared to middle-income children (Evans & English, 2002). The immediate and long-term consequences of economic hardship have been documented at both the individual- and family-level (e.g., K. J. Conger, 2011; Donnellan, Conger, McAdams, & Neppl, 2009; Duncan & Brooks-Gunn, 1997). Findings have demonstrated links between poverty and mental health, including social-emotional development (e.g., externalizing/internalizing problems; Gershoff, Aber, & Raver, 2003), between SES and cognitive development (e.g., developmental delays and learning disabilities; Brooks-Gunn & Duncan, 1997; Ackerman, Brown, & Izard, 2004), and between social class position and physical well-being (e.g., Evans & English, 2002).

To assist in the design, implementation, and evaluation of programs and interventions that may support the development of all youth, particularly those in the greatest need of such supports, it is useful to consider 3 broad sets of variables thought to contribute to positive adjustment (Luthar, Cicchetti, & Becker, 2000; Masten & Coatsworth, 1998): (a) *attributes of the individual* (e.g., ability, temperament, motivation), (b) *characteristics of the family* (e.g., parental interest and support), and (c) *aspects of the wider social context* (e.g., neighborhoods, social support system). School activities and community programs (e.g., high school sports teams, drama club, Boys and Girls Club, YMCA) are key characteristics of the community that may support youth development in ways not afforded in other areas of their lives (Mahoney, Larson, & Eccles, 2005). For example, youth report higher rates of experiences involving goal setting, problem solving, effort, and time management in organized activities than when hanging out with friends and in academic classes (Hansen, Larson, & Dworkin, 2003). Nationally representative data suggest nearly 70% of American children and adolescents participate in one or more organized

activities or programs in a given year (Feldman & Matjasko, 2005; Mahoney, Harris, & Eccles, 2006), though participation rates are significantly lower for lower-income and minority youth (Pedersen & Seidman, 2005).

Research on PYD tends to focus on supports and opportunities afforded by activities and programs, such as after-school settings, and their contribution to youth development (Fauth, Roth, & Brooks-Gunn, 2007). In their executive summary, the Committee on Community-Level Programs for Youth provided comprehensive results on effective community programs and offered guiding principles for future research to maximize the potential of these settings in fostering development (Eccles & Gootman, 2002). They noted that: (a) there is a need for a larger framework that promotes positive outcomes for all youth, particularly for those who are in the greatest need, but have the fewest resources; (b) a developmental systems view of human development should be adopted, one that emphasizes plasticity and the potential for positive developmental change across the life span (Lerner, 2002); (c) young people's strengths should be integrated with interpersonal and institutional supports to maximize their potential; and (d) attention should be paid to "ecological nutrients" in communities or in community-based programs that support youth development.

The Committee on Community-Level Programs for Youth also identified 28 personal and social assets (individual qualities) falling into 4 domains (i.e., physical health, intellectual, psychological/ emotional, social development) that may buffer youth growing up in disadvantaged circumstances and support a successful transition to adulthood. Various combinations of assets may contribute to positive development, but having more assets is better than having fewer, and continued exposure to supports and opportunities is most adaptive (Eccles & Gootman, 2002).

A growing body of evidence has demonstrated that school and community program participation is predictive of or associated with the protective personal and

social assets that were identified by the Committee on Community-Level Programs for Youth. For example, findings show youth activity participation is associated with better academic outcomes such as higher grades, test scores, school value, school engagement, and educational aspirations (Fredricks & Eccles, 2005, 2006, 2008; Eccles & Barber, 1999, Marsh & Kleitman, 2002), reductions in drop-out rates (Mahoney & Cairns, 1997), improved psychosocial adjustment including higher self-esteem, and heightened resilience (Fredricks & Eccles, 2006; 2008; Eccles & Barber, 1999; Mahoney, Schweder, & Stattin, 2002). Activity participation is also associated with more friendships (Bohnert, Wargo Aikins, & Arola, 2013), and civic engagement such as greater involvement in the political process and volunteerism (Youniss, Yates, & Su, 1997). Finally, decreases in internalizing problems such as reduced depression (Bohnert et al. 2013; Gardner, Browning, & Brooks-Gunn, 2012), externalizing behaviors such as reduced delinquency (Gardner, Roth, & Brooks-Gunn, 2009), as well as aggression, antisocial behavior, and crime for which results are stronger for high risk youth (Mahoney, 2000) have also been associated with participation in organized activities.

The long-term benefits of activity participation have also been demonstrated. For example, youth who participated in organized activities for 2 years (vs. 1 year) with greater intensity, or frequency of exposure, had greater odds of postsecondary attendance and completion (Gardner, Roth, & Brooks-Gunn, 2008). Studies have also shown participation is associated with or predictive of negative outcomes. For example, sport participation has been associated with greater risk behavior (e.g., alcohol use), injuries, stress, and burnout (e.g., Vest & Simpkins, 2013, Bartko & Eccles, 2003; Fredricks & Eccles, 2006, 2008; Fauth et al., 2007; Scanlan, Babkes, & Scanlan, 2005).

### *Limitations of the Body of Research on Organized Activity Participation*

#### Issues Related to Self-Selection

There are several limitations of the body of research on organized activity participation. Many early studies on organized activity participation used cross-sectional data with limited adjustment for youths' self-selection into activities, making it difficult to separate the causal effects of activity participation from differences that already existed between participants compared to non-participants (Holland & Andre, 1987; Larson, 2000; Marsh & Kleitman, 2002). This may lead to overstating the benefits of activity participation because many selection factors also predict positive adjustment (Fredricks & Eccles, 2006). Studies using longitudinal data have attempted to adjust for self-selection factors and found that the effects of participation on adjustment (academic, psychological, behavioral) are significant, but small (Fredricks & Eccles, 2006). Over-controlling for mediating variables, however, rather than including them in the analysis as variables of interest may cause some concern about these models (Evans, 2004).

More recent studies, such as one conducted by Gardner et al. (2008), adjusted for factors related to self-selection by including personal factors (e.g., motivation, skills, financial resources) and institutional factors (e.g., availability, transportation, costs) in their analyses, while controlling for demographic characteristics (i.e., gender, race/ethnicity, SES) and academic, behavioral, and familial constructs linked to activity participation (Marsh & Kleitman, 2002; Wimer et al., 2006) and success in young adulthood (e.g., Lopez & Kirby, 2005). Fredricks and Eccles' (2008) accounted for self-selection factors by entering individual and family variables (e.g., race, gender, SES) as interaction terms.

### Findings are Mainly Based on Samples of Middle-Income White Youth

The body of literature on organized activity participation is also limited by the fact that most of the findings, described above, are based on samples of middle-income White youth from the United States. Some studies are based on samples of Australian and Canadian youth (Fredricks & Simpkins, 2012), and one set of studies is based on a sample of 94% White youth living above the poverty line from the US, Chile, and Italy (Coatsworth et al., 2005). Thus, the body of literature is limited in its insights regarding the nature of participation (i.e., participation rates, patterns, quality), mechanisms of development, and related outcomes when it comes to youth from lower-resourced communities, and for ethnically diverse youth (Pedersen & Seidman, 2005).

Recent studies have addressed this gap by examining program processes and outcomes in a sample of economically and ethnically diverse youth. Fredricks and Eccles (2008) drew upon a large sample of African American and European American middle schoolers, and found fewer significant differences in the relationship between participation and development for lower- vs. higher-SES youth compared to other studies that used nationally representative datasets (Marsh, 1992; Marsh & Kleitman, 2002). Fredricks and Eccles (2008) stated that while they were better able to control for racial differences because income levels for African American and European families were normally distributed, they had “less power to detect an SES effect because there are fewer disadvantaged youth in the MADICS [Maryland Adolescent Development in Context Study] sample, compared to previous studies” (p. 1041) (Marsh, 1992; Marsh & Kleitman, 2002). One strength of their study, however, was their having adjusted for self-selection factors by including gender and race as predictors, including family SES, school engagement, and outcome variables at 7<sup>th</sup>

grade as covariates, and controlling for concurrent involvement in two other activity contexts.

Other lines of research have taken a different approach to studying program participation among diverse youth by placing low income (vs. middle to high income), rural (vs. urban), and ethnically diverse (vs. White) youth at the center of their investigation. For example, a recent study showed Latino-origin youth who, on average in the U.S., are from families with limited resources (U.S., Census Bureau, 2007), experienced positive benefits to their well-being when they participated in organized activities (Riggs, Bohnert, Guzman, & Davidson, 2010). Another study by Conger et al. (2012) demonstrated that the benefits of program participation span across multiple generations of rural low-income families. They found that activity participation during adolescence predicted lower risk for economic hardship in early adulthood due to the positive influence such participation had on academic attainment. Furthermore, they found a significant direct effect of participation in organized activity participation during high school on the academic outcomes of 3<sup>rd</sup> generation children, 13 years later, as well as investments made in enriching materials and activities for the 2<sup>nd</sup> generation, beyond the effect of the 2<sup>nd</sup> generation's educational attainment and economic hardship.

#### *Potential Mechanisms of Development*

Potential mechanisms of development thought to explain relations between program participation and indicators of adolescent adjustment have been identified. The Committee on Community-Level Programs for Youth recommended that development is most likely to occur in settings with the following 8 features of positive developmental settings (Eccles & Gootman, 2002): (a) *physical and psychological safety*, (b) *appropriate structure*, (c) *supportive relationships*, (d) *opportunities to belong*, (e) *positive social norms*, (f) *support for efficacy and*

*matter*ing, (g) *opportunities for skill building*, and (h) *integration of family, school, and community efforts*. These features are environmental qualities that may also protect youth from challenging circumstances. The more features programs can incorporate, the more likely it is that adjustment is promoted.

#### Key Program Features for Middle-Income White Youth

Studies within the body of literature on organized activities, mainly based on samples of middle-income White youth from suburban communities, have continued to identify key supports and opportunities that may explain the link between activity participation and youth outcomes. Results from these studies are closely related to the 8 features of positive developmental settings described above (Eccles & Gootman, 2002): (a) *acquiring and practicing skills* (e.g., emotional regulation; Larson, Hansen, & Moneta, 2006); (b) *active membership in one's community* (e.g., opportunities for civic engagement in activities promotes development while providing services to the community; Johnson, Beebe, Mortimer, & Snyder, 1998); (c) *establishing supportive peer networks* (e.g., youth in school clubs report having more academic, prosocial, and less-deviant friends than non-participants, and participation facilitates the development and maintenance of friendships; Bohnert, Wargo Aikins, & Arola, 2013; Eccles & Barber, 1999; Schaefer, Simpkins, Vest, & Price, 2011); (d) *opportunities for self-development and identity exploration* (e.g., faith-based youth groups, compared to other types of activities, were found to be rich venues where youth reported significantly more opportunities for “thinking about who I am”; Larson et al., 2006); (e) *belonging to a socially valued group* (e.g., athletes show greater school success and engagement thought to be due to the high-status of sports in American high schools; Eccles & Barber, 1999); and (f) *connections to supportive adults* (e.g., greater access to teachers and counselors in sports and school clubs; Eccles, Barber, Stone, & Hunt, 2003).



To better understand how to promote positive experiences and outcomes among all youth, not just middle-income White youth, it is important to identify key program features that may be particularly important for lower-income ethnically diverse youth. This includes understanding how mechanisms of development may differ for these youth depending upon their individual characteristics (e.g., gender) and aspects of their developmental context (e.g., family, neighborhood) (Simpkins et al., 2013). There is also a need to elucidate differences within groups of lower-income youth, such as between lower-income White and non-White youth, and urban low-income and rural low-income youth. Poverty rates, as well as the mechanisms thought to explain the link between poverty or low-income and health outcomes, are different for poor children growing up in rural America, compared to poor children growing up in urban America (Vernon-Feagans, Garrett-Peters, De Marco, & Bratsch-Hines, 2012).

In addition, while SES has been a consistent predictor of adolescents' participation in organized activities and programs (e.g., Fredricks & Eccles, 2008), studies have focused on family income as an indicator of SES, without addressing other aspects of SES (Simpkins et al., 2013). For example, the negative impact of socioeconomic instability on parenting behavior, such as harsh punitive parenting and a lack of parental support is a primary mediator of the effect of poverty on children's development (Yates, Egeland, & Sroufe, 2003; Bradley, Corweyn, McAdoo, & Coll, 2001; Emery & Laumann-Billings, 1998; Ackerman, Izard, Schoff, Youngstrom, & Kogos, 1999). Maternal emotional distress and parenting practices, for example, were shown to mediate the relationship between family income and behavior problems for African American children ages 7-15 from single-parent families (Linver, Brooks-Gunn, & Kohen, 2002). Thus, the study of parental support as one aspect of SES may

provide new insight into the role of SES in youths' program experiences, processes, and outcomes.

#### Key Program Features for Low-Income Youth

Just as the Committee on Community-Level Programs for Youth identified key features that may promote youth development, so can we identify key features of activity settings that may be particularly important for lower-income youth. A literature review by Ja (2008a) examined what is known about the link between poverty and developmental outcomes among adolescents, what is known about the link between program participation and youth outcomes among middle-income White youth, and what is known about lower-income youths' program participation. Nine features of activity settings (not presented in any particular order) that may be particularly important for low-income youth were identified (Table 1). These include the following:

Table 1. *Key Features of Activity Settings for Low-Income Youth*

Opportunities to improve physical health	Links to prosocial peers	Increase youth engagement & voice
Positive adult mentors due to high family disruption	Increased resources, school connectedness & achievement	Youth-environment fit, ethnic minorities, & identity
Safety, structure & nurturing competence	Promote connectedness & parent involvement	Promote self-directed development

(a) *opportunities for improving physical health* (e.g., links between the environment of poverty, like asthma-related allergens, and adverse health effects suggest programs, like sports, if structured appropriately, can promote physical activity (Evans, 2004; Davis et al., 2007);

(b) *interactions with positive adult mentors* due to high family disruption (e.g., low-income youth have a greater likelihood of experiencing family violence and disruption, while program participation affords access to non-parental positive adult leaders, a key protective factor and agent of intervention (Conger et al., 1993; Dubois & Rhodes, 2006);

(c) *safety, structure, and nurturing competence* (e.g., youth growing up in neighborhoods with high rates of violence may see programs as a “respite from the dangers of everyday life” (Fauth, Roth, & Brooks-Gunn, 2007, p. 762), especially programs with physical/psychological safety, clear rules, and positive social norms (Sampson, Raudenbush, & Earls, 1997; McLaughlin, 2000);

(d) *links to prosocial peers* rather than deviant peers (e.g., disadvantaged youth have more deviant peer affiliations during pre-adolescence, while participation in well-structured programs has been positively associated with having more prosocial peers; Brody et al., 2001; Eccles & Barber, 1999);

(e) *increased resources, school connectedness, and academic achievement* (e.g., effective programs can provide resources (e.g., computers, information for applying for college and financial aid), cognitive stimulation, and positive adult interactions that are associated with improved grades, peer relations, and less deviant behavior among youth from low-income families; Pettit, Laird, Bates, & Dodge, 1997; Posner & Vandell, 1999; McLaughlin, 2000);

(f) *opportunities for connectedness and parental involvement* (e.g., community connectedness is a protective factor for health outcomes among youth, and a positive relationship with at least one parent contributes to connectedness, thus parents’ involvement in programs should be promoted; Resnick, Harris, & Blum, 1993; Whitlock, 2007; Lopez & Lechuga, 2007);

(g) *engaging youth and promoting voice* (e.g., effective programs can promote youth engagement and youth voice, fostering feelings of agency, belonging, autonomy, and self-directedness, while improving access to youths' perspectives to better inform program changes; Casey, Ripke, & Huston, 2005; Fielding, 2001);

(h) *youth-environment fit, ethnic minority youth, and identity exploration* (e.g., programs that foster feelings of respect, warmth/comfort, and support may serve as safe havens for active resistance against mainstream culture and forming an individual and cultural identity; McLaughlin, 2000; Villarruel, Monero-Sieburth, Dunbar, & Outley, 2005); and

(i) *opportunities for self-directed development* (e.g., low-income youth may experience disruptions in self-development beyond that of the normative cognitive liabilities experienced by adolescents, as activity settings provide opportunities for identity exploration and self-regulation; Larson et al., 2006; Harter, 2006; Harter & Monsour, 1992).

Several of these features are related to affording opportunities for youth to discover their interests, engage in active self exploration, shape a personal identity (e.g., Larson, 2000; Eccles & Barber, 1999; Erikson, 1968; Waterman, 1984), and feel intrinsically motivated to take on challenges and engage in meaningful activities (e.g., Larson, 2000). Thus, opportunities for promoting youths' self-determining processes through key learning experiences, connecting with others, and making meaning of their experiences can be considered one key potential mechanism through which organized activities are thought to impact development.

While the development of a coherent and fully integrated self is a primary task of adolescence (Lerner et al., 2005; Erikson, 1968; Harter, 2006), lower-income youth are known to experience multiple cumulative risks (Evans, 2004), including additional challenges and potential disruptions in the development of the self (e.g., Harter, 2006).

Thus, it is particularly important to understand how to maximize the role of program participation in promoting these processes among all youth, particularly among the most vulnerable youth.

*One Key Potential Mechanism of Development: Youths' Self-Determining Processes*

Key insights into adolescents' self processes, particularly those related to self-determined and agentic self-reflective processes, have been summarized in a comprehensive literature review by Ja (2008b). Larson (2009) recommended importing theories from other disciplines to develop and test a model from which to study diverse young people's development. Thus, the theoretical approaches covered in that literature review include those adopting a developmental perspective (e.g., self-concept, authenticity, possible selves; Harter, 2006), a life narrative approach (McAdams, 1985), a motivational perspective (e.g., SDT; Deci & Ryan, 2002), and an approach focused on experimental disclosure (e.g., studying the effects of engagement in different types of reflection; Lyubomirsky, Sousa, & Dickerhoof, 2006). Six key factors in the study of youths' formation of a well-integrated self were identified (Ja, 2008b) (Table 2):

Table 2. *Six Key Factors In the Study of Youths' Formation of a Well-Integrated Self.*

Account for differences in cognitive liabilities and capacities by periods of adolescence	Promote processes of self-integration <i>and</i> integration with others	Use methods that capture spoken, written, & thinking reflection, and their relationship with well-being
Assess authentic, volitionally self-determined experiences	Environmental supports are key	Use a delineated measure of self-integration to capture degrees of internalization

## Developmental Perspectives

Both Lerner et al. (2005) and Brandtstädter (1998, 1999) argue that adolescence is a key period for studying the self. Important cognitive and social transitions are taking place at this time that make issues related to identity and to the self key developmental tasks of this period of the life course. Because adolescence is a time when young people are preoccupied with figuring out “Which is the real me?” (Harter, 2006) while considering the possibility of who they can become, their possible selves (Markus & Nurius, 1986), there exists a unique opportunity for helping young people acquire skills to understand their own self processes. Theories adopting a developmental focus such as self-concept and life narratives (Habermas & de Silveira, 2008) provide insight into the developmental advancements (e.g., integration of “opposite” attributes into higher-order abstractions; Fischer & Lamborn, 1989), liabilities (e.g., engagement in all-or-none thinking; Harter, 2006), and growing capacity of young people (e.g., perspective taking) to actively engage in their own development through self-reflection.

## The Self as Authentic and Volitionally Self-Determined

Despite the use of different terminology - authentic, true, core, unified, self-determined, or the volitional self – what is common across the various theoretical frameworks is the perspective that human potential is maximized when people are enabled to act “in accordance with the true self, expressing oneself in ways that are consistent with inner thoughts and feelings” (Harter, 2002, p. 382). Findings converge around promoting opportunities for exploring, expressing, and acting in ways that are congruent with what one perceives as one’s truest self. Self Determination Theory (SDT; Deci & Ryan, 2013) conceptualizes the authentic and volitionally self-determined experience of the self as, “a sense of freedom to do what is interesting, personally important, and vitalizing,” and that the human potential for being self-

determined is most likely to occur when the human need for autonomy, competence, and relatedness are satisfied.

#### Promoting Self-Integration and Connection with Others

Most theoretical frameworks point to humans' inherent tendency towards self-integration and connection with others (e.g., Deci & Ryan, 2002). Thus, environments that promote self-exploration, self-reflection, self-understanding, and autonomy, should try to, at the same time, assist youth with making sense of themselves in relation to, and in connection with, the world around them.

#### The Need for Environmental Support

Though discussing processes related to self-development inherently implies a focus on the self as constructed within the self, the construction of the self is very much determined, shaped, maintained, and developed through interaction with the social world; this was the assumption adopted by most theoretical perspectives. The balance between feeling autonomous and feeling connected to others is most likely to occur within safe and supportive environments in which youth feel a sense of belonging. Work on self-concept underscores the role of caregivers in supporting the construction of the self at a time when young people are susceptible to internalizing negative views of the self (Harter, 2006). For example, conditions of chronic or severe abuse may lead to the formation of a fragmented and disjointed self which is difficult to resolve as these memories may be more difficult to access. SDT argues for the satisfaction of environmental "nutriments." If these are present, growth and human thriving will be achieved; if those supports are lacking, growth is stalled or thwarted (e.g., Deci & Ryan, 2002). While all of these perspectives discuss the importance of significant relations in a young person's life, particularly relations with significant others (i.e., parents, peers, teachers), they elucidate, to varying degrees, how those environmental supports should be carried out.

## Methodological Issues

Reviewing a diverse set of literature allows one to draw upon the most appropriate method or set of methodological approaches in the study of adolescents' self processes. Several methodological approaches should, thus, be considered:

(a) focus on the positive aspects of development (e.g., Lerner et al., 2005; Lyubomirsky et al., 2006), in addition to the negative (e.g., Frattaroli, 2006; Oyserman & Markus, 1990) to promote youth as agents of development;

(b) examine language as it is spoken, written, and thought about in the construction of the self (e.g., Lyubomirsky et al., 2006; Harter, 2006; Singer, 2004);

(c) understand the link between self-reflective processes, internalization processes, and indicators of well-being, such as life satisfaction, as well as mental and physical health (e.g., Reis et al., (2000); and

(d) assess various types of reflection (e.g., talking vs. thinking), the content of those reflections (e.g., positive vs. negative life event), and their relationship to more distal youth outcomes.

## Processes of Internalization

The various theoretical perspectives differ in whether, as well as the extent to which they describe a model of internalization, or a suggested pathway through which information related to the self becomes internalized and integrated into the self. One of the strengths of the Self-Determination Theory framework (SDT; Deci & Ryan, 2002), compared to other frameworks (e.g., self-concept), is that it provides one of the only delineated measures of the extent to which experiences within learning environments are integrated into the self-system (Self-Regulation Questionnaire (SRQ); Ryan & Connell, 1989). Though SDT focuses less on assessing differences by periods of adolescence, compared to other frameworks (e.g., self-concept), the original SRQ scale was developed for use with early adolescents. Furthermore, work in SDT



has already established strong links between autonomous motivation that indicates a high degree of internalization and well-being in samples of adolescents (e.g., Vallerand, Fortier, & Guay, 1997). In addition to providing a theoretically grounded, well-delineated measure of internalization processes, SDT shares many of the same theoretical assumptions as other frameworks in maximizing human potential for growth and thriving. Thus, SDT is a useful theoretical framework for this investigation that explores youths' self processes in the context of school and community programs.

*Situating Self-Determination Theory's Concepts of Motivation and Internalization Processes Within the Larger Body of Research on Children's Motivation*

In a review of research on motivational beliefs, values, and goals with a focus on developmental and educational psychology, Eccles and Wigfield (2002, p. 127) provide a useful guide for navigating "the proliferation of different terms (and measures) for similar constructs [that] makes theoretical integration more difficult". Reviewing their organizational framework helps provide an overview of the relevant literature, including defining and distinguishing between key concepts. Furthermore, the use of this organizing framework helps situate key concepts, theory, and measurement tools from research related to Self-Determination Theory within a larger body of research on children and adolescents' motivation.

Eccles and Wigfield (2002) grouped motivational theories into four broad categories. The first category includes those focused on *expectancy*, or the beliefs about how one will do on a task or activity. They focus on an individual's beliefs about their own competence and efficacy, expectations for success and failure, and sense of control over the outcome. These theories include self-efficacy theory (Bandura, 1997), as well as control theories such as locus of control (Rotter, 1966),

and those related to Self-Determination Theory's framework of the three basic needs (i.e., autonomy, competence, relatedness) (Connell & Wellborn, 1991).

The second category of motivational theories, according to Eccles and Wigfield (2002) are those focused on reasons for engagement. While people can be certain they can do a task, they may not have a compelling reason to do it. Intrinsic motivation theories distinguish between individuals being intrinsically motivated (i.e., engaging in an activity due to interest and enjoyment) or being extrinsically motivated (i.e., engaging in an activity for instrumental or other reasons), such as receiving an award. Self-Determination Theory (SDT; Deci & Ryan, 2002) is one such theory. SDT posits that under the right conditions, people become intrinsically motivated by challenging tasks and become personally engaged, and when they are intrinsically motivated, or when they have internalized a learning goal, people learn more effectively. When intrinsic motivation is decreased by asserting external control and providing negative feedback, intrinsic motivation is reduced (Deci, Koestner, & Ryan, 1999). For example, "a student who consciously and without any external pressure selects a specific major because it will help him earn a lot of money. This student is guided by his basic needs for competence and self-determination, but his choice of major is based on reasons totally extrinsic to the major itself" (p. 113). This is reminiscent of experiences related to the authentic self (e.g., Harter, 2002; Impett et al., 2008) in that one may act in accordance with a regulation that originates from outside the self, but that action is not necessarily experienced as truly defining of the self.

SDT extended the extrinsic-intrinsic motivation dichotomy to a discussion of internalization, or "the process of transferring the regulation of behavior from outside to inside the individual. When individuals are self-determined, their reasons for engaging in behavior are fully internalized" (Eccles & Wigfield, 2002, p. 113). Eccles

and Wigfield (2002) emphasize that interpersonal relationships and connection with others, what SDT calls relatedness, play an important role in “why people turn external goals into internal goals through internalization” (p. 113). SDT adopts an *organismic-dialectical perspective* that “humans are active, growth-oriented organisms who are naturally inclined towards the integration of their psychic elements into a unified sense of self and integration of themselves into the larger social structures” (Deci & Ryan, 2000, p. 229). However, SDT also argues that integration and psychological growth do not happen automatically, but depend upon specific social-contextual factors that support or hinder this tendency.

Internalization is therefore, not conceptualized in terms of a dichotomy, but rather in terms of a continuum (Deci & Ryan, 2008; Ryan & Connell, 1989). The more fully internalized and integrated a regulation is with the self, the more it is the basis for autonomous self-determined behavior. A taxonomy representing the process “of going from external to internalized regulation” is provided by Deci and Ryan (2002) (Figure 1):

Type of Motivation	Amotivation	Extrinsic Motivation				Intrinsic Motivation
Type of regulation	Non- regulation	External regulation	Introjected regulation	Identified regulation	Integrated regulation	Intrinsic regulation
Quality of Behavior	Nonself-determined				Self-determined	

Figure 1. *The Self-Determination Continuum with Types of Motivation and Types of Regulation (Deci & Ryan, 2002, p.16).*

The taxonomy, or Self-Determination Continuum (Deci & Ryan, 2002), is arranged from left to right in terms of the extent to which the motivation for behavior

emanates from the self (i.e., autonomous). This is what has been referred to in many studies that use the SDT framework to study the factors influencing self-determined behavior, including studies with adolescences, as autonomous motivation (e.g., Soenens & Vansteenkiste, 2006). At the very left is *amotivation*, the state of lacking the intention to act, so that people either do not act at all or act passively. The other five points refer to classifications of motivated behavior:

(a) *external regulation* is when a regulation for behavior comes from outside the individual (the least autonomous of extrinsic motivations) (e.g., obtain rewards or avoid punishments);

(b) *introjected regulation* involves regulating behavior from an internal source, but not in a way which is truly accepted as one's own (e.g., avoid guilt and shame);

(c) *identified regulation* involves valuing "the utility of that behavior" (Eccles & Wigfield, 2002, p. 113), although the motivation for such behavior may not reflect one's overarching beliefs;

(d) *integrated regulation* involves a regulation that is "based on what the individual thinks is valuable and important to the self," but "behavior is still not fully internalized and self-determined" (Eccles & Wigfield, 2002, p. 113); and

(e) *intrinsic regulation* which is the state of doing an activity out of interest and inherent satisfaction (Deci & Ryan, 2002, 2008).

Returning to our discussion of broad categories of motivational theories, Eccles and Wigfield (2002) identified a third group of theories that integrate expectancy and value (the incentives or reasons for doing a task or activity) constructs. These include Weiner's (1992) achievement attributions (i.e., locus of control, stability, controllability), as well as Eccles and her colleagues' (e.g., Wigfield & Eccles, 2000) expectancy-value model which consider as key determinants the relative value and chances of success.

The fourth broad category of motivational theories include theories that integrate motivation and cognition, including social cognitive theories of self-regulation that are interested in how motivation gets translated into regulated behavior. This view “emphasizes the importance of self-efficacy beliefs, causal attributions, and goal setting in regulating behavior directed at accomplishing a task or activity. Once children engage in a task, then “they must monitor their behavior, judge its outcomes, and react to those outcomes in order to regulate what they do” (Eccles & Wigfield, 2002, p. 125). Zimmerman’s (1989) social cognitive theory of self-regulation describes “self-regulated students as being metacognitively, motivationally, and behaviorally active in their own learning processes and in achieving their own goals” (p. 124), and accounts for reciprocal relations between person, environment, and behavior (Eccles & Wigfield, 2002). These theories seem to provide a more complex and dynamic perspective of human motivation, one that accounts for people as active agents of development.

It is important to note that Eccles and Wigfield (2002) situate SDT’s internalization processes within their second category of motivational theories focused on the reasons for engagement, not in their third broad category of theories related to how motivation and cognition work together, which include social cognitive theories of self-regulation. To reiterate, Eccles and Wigfield (2002, p. 127) acknowledge the “proliferation of different terms (and measures) for similar constructs [which makes] theoretical integration more difficult”. To provide some clarity around these theories and concepts, it seems as though SDT’s concept of self-regulation describes the extent to which the reasons for engaging in a behavior that originated outside the self becomes internalized. Thus, when the reason for a behavior becomes aligned with the true or authentic self (Harter, 2002) and well-integrated into the self-system, the behavior can be said to be self-regulated, or autonomously motivated. On the other

hand, when the motivation for a behavior does not originate from within the self and is continues to be driven by external sources (e.g., reward, to avoid punishment), the behavior can be said to be externally regulated.

#### *Autonomous Motivation and Youths' Activity Participation*

Larson (2000) argued that youths' selection into organized activities makes these contexts prime settings for the study of intrinsic motivation in promoting development. He also called for the use of motivational constructs in the study of organized activity participation because they provide "a more tangible means to conceptualize the conditions under which agency is, or can be, mobilized toward learning and growth" (Larson, 2000, p. 3). Thus, applying Self-Determination Theory's concept of autonomous motivation to this investigation embeds the study of adolescents' participation in school and community programs within a motivational and action framework. Promoting young people's internalization processes within the context of activity participation is referred to by Gestsdottir et al. (2011) as, "the alignment of adolescent strengths with the resources in their context" (p. 61).

"When integrated regulation is promoted, individuals may "identify with the importance of social regulations, assimilate them into their integrated sense of self, and thus fully accept them as their own... in doing so, they will become more integrated not only intrapsychically, but also socially" (Deci & Ryan, 2000, p. 232). Thus, youth may benefit from opportunities to identify and integrate their personal goals and values with the goals and values of an activity or program. Key features of activity participation, such as feeling connected to adults in one's activity setting, may facilitate this identification and internalization process. Since all people have a tendency towards self-integration, yet may go about this process to different extents and in various ways, it may be of value to better our understanding of individual

differences in youths' engagement in reflection, so that practitioners may be better equipped to harness these capacities among young people.

Some studies have investigated concepts and principles related to young people's autonomous functioning in the context of school and community program participation. Dawes and Larson (2011) drew on SDT's theory of autonomous motivation to interpret youths' accounts of becoming *engaged*, or fully absorbed in an activity's tasks and challenges, where "the process of coming to experience program activities as having important relevance and meaning to their lives" is thought to be "related to personal values or standards, personally meaningful interests or ambitions, or personal identity" (p. 263). Their findings, based on qualitative data, supported SDT's notion that increased motivation and engagement occurs on a continuum as a person identifies with, internalizes, and integrates the goals of an activity into the self-system, with complete internal regulation representing the strongest indicator of motivation (Ryan & Deci, 2000). Their findings provided evidence that youth who reported forming a personal connection with an activity (e.g., learning for the future, developing a sense of competence, pursuing purpose) through changes in themselves (e.g., developing knowledge, skills, value, future goals), and in how they perceived the activity (e.g., learning the relevance of the activity to goals), experienced "increased convergence between self and the activity" (Dawes & Larson, 2011, p. 263).

In another study, Watts and Caldwell (2008) adopted SDT's internalization continuum (amotivation vs. intrinsic motivation) (Deci & Ryan, 2000) to examine young people's activity participation as predictors of *initiative*, or persistence through challenge over time that develops in structured activity contexts and promotes intrinsic motivation (Larson, 2000). While amotivation was hypothesized to disrupt the development of initiative, which requires wanting to do and being invested in an activity, intrinsic motivation was thought to "fulfill natural inclinations for perceived

freedom and control, mastery, spontaneous interest, and exploration,” thought to be sparks for the development of initiative (Watts & Caldwell, 2008, p. 162-163; Larson, 2000).

Watt’s and Caldwell’s (2008) sample consisted of 377 primarily White (86%) 9<sup>th</sup> graders (ages 13-15) recruited from 3 suburban high schools. Their *free time activity participation* inventory captured structured (e.g., organized sports) and unstructured (e.g., watching TV, reading) activity participation. *Self-determination in free time* was assessed using the Free Time Motivation Scale for Adolescents (FTMS-A; Baldwin & Caldwell, 2003) capturing 5 forms of motivation regulatory styles (Deci & Ryan, 2000). In this study only the intrinsic motivation (e.g., “I do what I do in my free time because...”) and amotivation (e.g., “I don’t know, I have never really thought about it”) scales were used. An adapted 7-item measure of *adolescent initiative in free time* (e.g., “When I start something, I stick with it”) was employed (Hutchinson, Caldwell, & Baldwin, 2002).

Results from Watts and Caldwell’s (2008) study showed: (a) intrinsic motivation was positively associated with initiative; (b) mediating models accounted for 25% of the variation in initiative for models with intrinsic motivation, and 33% of the variation when examining the amotivation model; and (c) unstructured activity participation was negatively associated with initiative. Thus, initiative is positively related to internalized forms of motivation, and negatively related to amotivation. The study demonstrated proximal processes (Bronfenbrenner, 1979) are powerful developmental processes, and that while the ability to be internally motivated is a developmentally supportive intrapersonal characteristic, being amotivated is developmentally disruptive (Bronfenbrenner & Morris, 1998). Programs were shown to provide “prolonged exposure to internally motivated experiences... [and] provide



the support of adults who can monitor and provide opportunities to support autonomy, relatedness and competence in youth” (Watts & Caldwell, 2008, p. 175).

A study conducted by Coatsworth, Palen, Sharp, and Ferrer-Wreder (2006) assessed the link between involvement in *self-defining activities* (i.e., activities that are strongly representative of who the person is or would like to become; Coatsworth, et al., 2005), *expressive identity* (i.e., personal expressiveness, flow, and goal-directed behavior; Waterman, 1990), and *psychological wellness*, comprised of subjective life satisfaction (Cowen, 1994; Park, 2004) and developmental assets (Benson, 2003). A previous study by Coatsworth et al. (2005) had established the 3-factor model for expressive identity within self-defining activities in a sample of 493 youth from the United States, Chile, and Italy. While drawing upon participants from 3 countries, their sample consisted of mainly White (94%) high school aged youth who lived above the poverty line.

Results from Coatsworth et al.’s (2005) study showed mean level of identity scores were not significantly different across activity types (i.e., social/passive, instrumental, sports/active, arts, religious/volunteer, scouts/clubs), and boys reported significantly lower expressive identity in instrumental activities (school, job) compared to girls. Furthermore, general activity participation and self-defining activities were significantly related to wellness, controlling for individual and family characteristics. Expressive identity was also shown to mediate relations between self-defining activities and wellness. In another study by Palen and Coatsworth (2007), the three identity experiences (i.e., personal expressiveness, goal-directed behavior, and flow) were significant predictors of decreased delinquency and increased wellness (i.e., life satisfaction, positive affect, negative affect), while goal-directed behavior uniquely predicted decreased delinquency and increased wellness.

One alternative framework for considering children and adolescents' developing capacity for self-integration was proposed by Lerner et al. (2011), whose concept, *intentional self-regulation*, refers to the attributes and actions of an individual to enact, select, or adapt strategies in attaining a goal "to actively contribute to mutually beneficial individual-context relations" (p. 3). Situated within the PYD literature, they assert that self-regulatory processes "may underlie the adaptive developmental regulations promoting positive development" (Gestsdottir et al., 2011, p. 68), and that by measuring the extent of youths' intentional self-regulation, we can determine differences in the degree to which youth "act upon" (p. 63) their context to make meaning, actively engage with, and integrate experiences in their learning environments.

While using similar language to describe their concepts, SOC places self-regulative processes at the forefront, while SDT places reasons for engaging in an activity, sources of motivation, and degrees of internalization at the forefront. Though SDT also refers to self-regulation (Self-Regulation Questionnaire; Ryan & Connell, 1989) as Lerner et al. (2011) (intentional self-regulation) and Zimmerman (1989) (social cognitive theory of self-regulation) do, SDT focuses on the reasons for engaging in a behavior and the extent to which reasons that originate from outside the self become integrated into the self-system. This conceptualization differs from the social cognitive theory of self-regulation (Zimmerman, 1989), described by Eccles and Wigfield (2002), that emphasizes individuals as active participants in reciprocal relations between person, environment, and behavior. However, in developing the Self-Regulation Questionnaire, from which the Autonomous Motivation subscale is derived, Ryan and Connell (1989, p. 749) highlight the importance of the "access an actor has to his or her own internal states" rather than "rely[ing] more heavily on the absence or presence of environmental factors and their correlation with action". Thus,

SDT's concept does seem to account for, though to a much lesser extent than do theories of self-regulation, the individual as an active agent in their own motivational processes.

While noting that intentional self-regulation can be operationalized in various ways (Brandstädter & Lerner, 1999), within the 4-H study, Lerner et al. (2011) drew from the selection, optimization, and compensation (SOC) model developed by Baltes, Baltes, Freund, and colleagues (e.g., Freund & Baltes, 2002). *Selection* captures how people develop, elaborate, structure, and commit themselves to a particular goal, thus, giving direction to development. *Optimization* captures seeking strategies/resources that are compatible with personal/social values in pursuing a specific goal. *Compensation* captures how people adjust goals to avoid losses in attaining one's goal.

Findings from a series of studies demonstrated the benefits of intentional self-regulation on PYD trajectories and developmental outcomes among early adolescents (Zimmerman, Phelps, & Lerner, 2008) and among middle adolescents (Gestsdottir et al., 2009), where developmental outcomes were strongest for the optimization and compensation components. In addition, their findings showed that involvement in after-school programs is directly linked to development of intentional self-regulation that, in turn, benefits youth outcomes (i.e., the 5 C's including Competence, Character, Community) (Gestsdottir et al., 2011). In a separate study with a sample of youth living in neighborhoods with relatively low levels of ecological assets, youth with the greatest capacity to self-regulate (highest SOC scores) benefitted most from involvement in out-of-school time activities (Urban, Lewin-Bizan, & Lerner, 2010), and those relations were particularly strong among girls.

Advancements in the study of youth as active agents of development in the context of school and community program participation, whether understood through enhanced self-regulation or enhanced autonomous motivation, have been made.

However, “more nuanced analyses [that] seek[s] to ascertain the presence and bases of interindividual differences in the system of relationships” among intentional self-determined processes, ecological assets, and thriving is needed (Gestsdottir et al., 2011, p. 69). For example, are certain types of activities, features of developmental contexts, or patterns of participation more strongly associated with autonomous motivation because they help align diverse youth with the supports and opportunities they need? How do these relations differ “among adolescents who vary in age, race, SES, religion, and a host of other demographic categories, as well as gender” (Gestsdottir et al., 2011, p. 69)? Do those youth who are in the greatest need of such supports benefit the most from enhanced autonomous motivation? Thus, to identify the ecological assets within programs that are likely to support youths’ autonomous motivation, particularly for economically and ethnically diverse youth, we can draw upon what is known about the link between key characteristics of programs, of participation, and of participants and youth outcomes, as well as interactions between these factors.

*Key Characteristics of Programs, of Participation, and of Participants Likely to Promote Autonomous Motivation Among Diverse Youth*

Connectedness to Non-Parental Adults in Programs

The role of supportive non-parental adults as a key protective factor and primary agent of change has been established by work on natural mentors (Dubois & Silverthorn, 2005; Dubois & Rhodes, 2006), resilience (e.g., Werner & Smith, 2001), social capital (Enfield, 2008), social networks (Cotterell, 2007), and PYD (Bowers et al. 2013). The presence of important non-parental adults has been shown to benefit youth with regards to educational accomplishments, risk/problem behaviors, and depressive symptoms (Dubois & Silverthorn, 2005). While the effects of positive

mentoring tend to vary by subgroups, stronger effects have been found for youth facing environmental risks and fewer benefits (Dubois et al., 2006).

There are several mechanisms through which supportive non-parental adults may promote youth outcomes in the context of organized activities. Larson (2006) emphasizes adult leaders' role in developing and structuring effective programs that match challenges with youths' abilities to promote adaptive learning, thus providing youth with opportunities to demonstrate effort and be successful at those tasks (e.g., Csikszentmihalyi, 1993). Larson (2002) has highlighted the role of effective program leaders in balancing youths' feelings of ownership with adult support, what is referred to as instrumental scaffolding (Rogoff, 1998) or motivational scaffolding (Csikszentmihalyi, 1993; Larson, Walker, & Pearce, 2005). Watts and Caldwell (2008) found supportive adult leaders within activity settings helped provide continued exposure to experiences that support a more intrinsically motivated regulatory style. Interactions with supportive adults in programs may also benefit youth by transmitting and reinforcing norms and values to help youth construct their own perspectives (Cooper, 1999). Eccles et al. (2003) found youth report higher than expected rates of accessing teachers and counselors in sports and school clubs that facilitate discussion of academic/occupational plans. Experiencing positive adult relationships in one arena of life may also have a generative effect by positively influencing youth-adult relations in other arenas of life, such as adult leaders' use of authoritative parenting practices helping youth shape internal working models for how adults act in given situations (Larson, 2006).

Relationships with positive adult leaders may also be beneficial when youth experience connectedness to adults, what Whitlock (2007, p. 501) defines as, "a psychological state in which individual youth perceive that they *and* other youth are cared for, trusted, and respected by adults, individually and collectively." School

connectedness has been found to be a strong predictor of health and academic outcomes among adolescents (Whitlock, 2006), while perceiving one is connected to his/her community was found to be one of the strongest protective factors for health outcomes (e.g., poor body image) in a survey of 30,000 youth (Resnick et al., 1993). Furthermore, a positive relationship with at least one parent was shown to contribute to community connectedness, as influenced by the quality of youths' exchanges with adults in the community (Whitlock, 2007). Other characteristics of supportive youth-adult relationships related to improved outcomes include warmth, acceptance, and closeness (Dubois & Silverthorn, 2005).

Karcher and Sass (2010) revealed gender and ethnic/racial differences in youths' reported level of connectedness in several domains of development (i.e., friends, siblings, school, peers, teachers, reading, and neighborhoods) using the Hemingway Measure of Adolescent Connectedness (Karcher, 2005). Drawing from data from a large sample (79% White) of middle-school children, they found girls reported higher connectedness across all domains compared to boys, with the exception of connectedness to one's neighborhood. They also found White youth reported higher connectedness to their neighborhood and friends, but lower connectedness to siblings compared to African American and Latino youth. African American youth reported the highest level of connectedness to siblings (vs. Latino youth), but the lowest connectedness to teachers.

Ryan and Deci (2008) have stated that providing an atmosphere of autonomy support is essential in promoting clients' active engagement and adherence so they can "identify with and integrate into their sense of self the values and regulations of new ways of being, perceiving, and behaving," thus "facilitating the target individual's self-organization and self-regulation of actions and experiences" (Ryan & Deci, 2008, p. 187-188). Similar to Whitlock's (2006) description of youth-adult relationships that

foster development through connectedness, support for autonomy includes understanding and acknowledging one's perspective (Koestner, Ryan, Bernieri, & Holt, 1984) and supporting choice (Moller, Deci, & Ryan, 2006). For example, in psychotherapy, a therapist understands and validates the client's internal frame of reference, trusts, facilitates self-organization and self-regulation of the client's actions, aids in the understanding of his/her experiences and taking responsibility for new behaviors, and cultivates interested attention or mindfulness (Ryan & Deci, 2008).

### Activity Type

Six activity types have been identified in the literature on organized activity participation (e.g., Larson et al., 2006): sports, performing and fine arts, academic clubs/organizations, community-oriented programs, service, and faith-based youth groups. Findings from a study with mainly White middle-income youth found differences in the developmental experiences (e.g., identity exploration, leadership and responsibility) reported by youth depending on the type of activity they are engaged in (e.g., Larson et al., 2006). Based on responses to the Youth Experiences Survey (YES), results showed, for example, that while sports participation was associated with higher rates of experiences related to initiative, emotional regulation, and teamwork, participation in performance and fine arts programs were related to higher rates of initiative and more positive relations with adults, but lower rates of opportunities for teamwork. Youth in academic clubs reported significantly fewer positive experiences across all developmental domains, while youth in community programs reported higher adult network experiences, but fewer experiences related to emotional regulation and teamwork. Finally, youth in service activities reported fewer opportunities for emotional regulation, but more experiences related to teamwork, positive relationships and networks with adults, while faith-based youth groups were rich in all positive developmental experiences.

Other studies have examined more distal youth outcomes in relation to youths' participation in different types of activities. Of the 6 activity types that are most commonly examined in the organized activity literature, sports are the most highly participated in activity among youth (Larson et al., 2006). Sports participation has been shown to be predictive of or associated with several positive (e.g., greater likelihood of attending college full time, less anxious/depressive symptoms, increased school value) and negative (e.g., greater substance use) indicators of development (Vest & Simpkins, 2013, Fredricks & Eccles, 2008; Fauth et al., 2007).

Results from a study by Fredricks and Eccles (2008) across 3 years revealed higher than expected psychological resiliency for those involved in school sports at 8<sup>th</sup> grade, but decreases in school value (with and without adjusting for self-selection factors) at 11<sup>th</sup> grade. The measure, psychological resiliency, was adapted from Furstenberg et al. (1999) (e.g., "How often are you good at: figuring out problems and planning how to solve them?"). In the same study, academic club participation was found to be a positive predictor of resiliency and prosocial peers at 8<sup>th</sup> and 11<sup>th</sup> grade. Prosocial activities, such as community service and faith-based programs, on the other hand, are consistently related to positive outcomes including high academic success, low rates of risky behavior, and having more academic-oriented friends and less friends who engage in risky behavior (Eccles & Barber, 1999). Other studies show school clubs tend to foster identity formation and prosocial norms (Hansen et al., 2003; Larson et al., 2006; Fauth et al., 2007).

#### Participation Duration

Participation duration (i.e., number of years one has participated in a given activity or program) is thought to be particularly important for more vulnerable youth to bring them up to where higher-income youth may be because, for example, meaningful relationships take time to develop, so the quality of youth-adult



relationships may increase over time, thus, providing enhanced benefits for youth (Larson, 2009). Higher-income youth have greater access to resources that foster sustained exposure to supports and opportunities that may be available in programs; this is what Larson (2009) called *redundant resources*. Longer participation duration in academic clubs, performing and fine arts programs, and student government has been associated with more positive academic functioning, psychological adjustment, and lower substance use (Fauth et al., 2007; Fredricks & Eccles, 2006). Longer participation duration in sports was associated with improved academic functioning and psychological adjustment, but also higher alcohol use and delinquency (Broh, 2002; Fauth et al., 2007; Fredricks & Eccles, 2006). Mahoney, Cairns, and Farmer (2003) found links between participation in 2 years of high-school-sponsored activities and college attendance at age 20, particularly for those with lower interpersonal competence.

#### Participant Characteristics

Fredricks and Eccles (2008) found differences in the relationship between participation and youth outcomes among low- vs. high-SES youth and between European American vs. African American youth. For example, school sport participation at 8<sup>th</sup> grade predicted a greater proportion of prosocial peers at 11<sup>th</sup> grade for lower SES youth, but a smaller proportion of prosocial peers at 11<sup>th</sup> grade for higher SES youth. Another study showed youth who have mothers with a college degree or higher (vs. high school degree or less) are twice as likely to be involved in prosocial activities (Eccles & Barber, 1999). With regards to race/ethnicity, most results from Fredricks and Eccles' (2008) study were generalizable by race for most outcomes. Exceptions included school club participation being associated with lower than expected declines in grades over time (8<sup>th</sup>-11<sup>th</sup> grade) for European American youth, but not African American youth. An earlier study by Fredricks and Eccles

(2006) showed that school club participation predicted lower internalizing behavior in African American adolescents, but not European American adolescents.

Fauth et al. (2007) found different patterns of participation in 5 activity types and degrees of breadth over time were associated with outcomes among 9-12 year olds drawn from 80 Chicago neighborhoods, and that these outcomes varied, to some extent, depending on neighborhood characteristics. For example, community-based club participation was positively associated with youth's anxiety/depression in violent neighborhoods only, which the authors attribute to increased exposure to violence in the community when attending community-based clubs.

Fredricks and Eccles (2008) tested interactions between key demographic variables (i.e., SES, race/ethnicity) with program characteristics (i.e., activity type). A significant School Sport X SES interaction showed that while school sports significantly predicted greater drops in depression, but fewer prosocial peers at 8<sup>th</sup> grade for higher SES youth, sport participation predicted less of a drop in depression but more prosocial peers at 8<sup>th</sup> grade for lower SES youth. A significant School Sport X Race interaction showed lower psychological resiliency among European American athletes (vs. non-athletes), but no difference in psychological resiliency among African American athletes (vs. non-athletes). Race and SES differences were attributed to differences in the type of sport, level of recognition, and opportunities for leadership afforded by the sport context, differences in program quality, differences in the peer culture surrounding sports for European American vs. African American youth (Eccles & Fredricks, 2006), and low-income early adolescents' access to prosocial peers in sport that was thought to buffer the negative impacts of exposure to multiple risk factors.

Important gender differences have also been found in the link between activity participation and youth outcomes. While boys who initiated and continued

involvement in academic clubs as they transitioned to high school reported having more friendships, girls with a similar pattern of participation reported greater loneliness (vs. satisfaction with current peer relationships and social support) (Bonhert et al., 2013). This may have resulted from the low status of academic clubs in American high schools that may heighten social isolation due to being part of a marginalized peer group, for which girls, at this point in development, may be more susceptible (Eder & Kinney, 1995). This explanation may also explain why, in the same study, girls who initiated and continued sports participation as they transition to high school reported significantly less loneliness, as sports, unlike academic clubs, are considered a high status activity in American high schools (Eccles & Barber, 1999).

While Fredricks and Eccles (2008) found that most outcomes assessed in their study were generalizable by gender, there were some exceptions, such as out-of-school activities predicting prosocial peers for girls only, and lower than expected declines in school value over time for males only. Earlier studies showed sports predicted lower alcohol/drug use for boys, but not for girls, as girls reported higher alcohol use 1 year after graduation (Fredricks & Eccles, 2006), and that performing arts participation protects males, but not females from drinking alcohol and skipping school (Eccles & Barber, 1999).

*Youths' Reflective Practices about Their Program Experiences and the Relationship  
Between Reflective Practices and Autonomous Motivation*

While we can identify key characteristics of programs, of participation, and of participants that are likely to support autonomous motivation, we can also consider ways of promoting youths' capacity to become aware of and align themselves with the personal and ecological assets that foster their own growth and development. One method for promoting youths' capacity for agentic self-development is providing opportunities for youth to engage in self-reflection. Larson (2006) recommends that

program leaders provide youth with opportunities for reflection to support them in drawing out the meaning embedded in their activity experiences. Gestsdottir et al. (2011) refer to this as optimizing youths' capacity for obtaining ecological assets that enhance development.

Organized school and community programs are known to provide more opportunities for self-reflection and self-development compared to schools (Fredricks & Eccles, 2008; Eccles & Barber, 1999). Brandtstädter (1998, p. 897) proposed as part of his *action theory* "that human ontogeny, including adulthood and later life, cannot be understood adequately without paying heed to the self-reflective and self-regulative [bases of]... personal development." Lerner et al. (2005) proposed that the study of adolescence provides opportunities for making unique insights regarding the "stabilization of the self and integration of the self with society, as youth reflect on and evaluate their skills and abilities and make decisions about how their set of attributes may be put to service in the larger context of their life and society" (p. 32). Youths' engagement in reflective practices about their experiences in activities and programs where they engage in cycles of real-world learning (Larson, 2006) can therefore be considered an act of agency in which they identify, access, or use the resources that, through reciprocal person-context relations, foster positive developmental trajectories (Gestsdottir et al., 2011).

While providing opportunities for youth to engage in reflection is often emphasized in the organized activity literature (e.g., Eccles & Barber, 1999), youth reflection has remained a relatively loosely defined concept. Thus, there is a need to develop the basic building blocks in the study of youths' reflective practices about their program experiences. This includes identifying the types of reflective practices youth engage in about their program experiences, testing for individual differences in youths' engagement in those reflective practices, and examining relations between

reflective practices and key processes of development, like autonomous motivation. There is also a need to assess relationships between characteristics of programs and engagement in reflective practices, and to test autonomous motivation as a potential mechanism through which reflection promotes youth outcomes in programs.

Concepts and measurement tools from other bodies of research can provide insight into the study of youths' self-reflective processes in the context of school and community programs. For example, insights can be gathered from the body of research on *experimental disclosure*, or “disclosing information, thoughts, and feelings about personal and meaningful topics” (Frattaroli, 2006, p. 823). A meta-analysis of 146 randomized studies of experimental disclosure showed experimental disclosure is effective at promoting various health and psychological benefits, with a positive and significant average *r*-effect size of .075 (Frattaroli, 2006). Lyubomirsky et al. (2006) found that associations between reflecting about meaningful life events and well-being differed depending on the type of reflection (i.e., writing, talking, thinking) participants were engaged in, and whether they reflected on a positive or negative life experience. For example, thinking about positive events helped maintain positive affect, thought to be due to the effects of *savoring*, or rehearsing, and re-experiencing the positive event (Fredrickson, 2001).

Evidence gleaned from studies on experimental disclosure points towards self-regulation as the underlying mechanism through which reflection may benefit participants' well-being (Frattaroli, 2006). Reflection is thought to allow people to observe themselves expressing and controlling their emotions. This promotes a stronger sense of self-efficacy for emotional regulation, thus facilitating people's sense of control concerning their traumas, stressors, or challenges (Frattaroli, 2006) and leading to improvements in well-being (Lepore, Greenberg, Bruno, & Smyth, 2002).

Findings gathered from work on SDT indicate that autonomous and self-determined functioning may be fostered by providing the following supports (Deci & Ryan, 2008, p. 190): (a) providing an autonomy-supportive environment; (b) offering opportunities for identifying and integrating new values and regulation of ways of being into one's sense of self; and (c) encouraging the delay of spontaneous emotions to make more reflective and authentic choices about expressing those emotions, and providing guidance in how to express oneself. These recommendations are similar to Larson's (2006) call for positive adult leaders to provide opportunities for youth to engage in self-reflection, helping them draw out the meaning embedded within their experiences as they engage in cycles of real-world learning. They are also in-line with Harter's (2002, 2006) call for providing opportunities for self-expression and authenticity to promote feelings of owning one's values and behaviors. All of these perspectives highlight strong connections with leaders and/or caregivers who can guide individuals towards more autonomously-driven behavior through meaningful reflection that feels authentic and true to the self.

The practice of engaging in reflective practices about program experiences may support youth in identifying their own goals, values, or meaning, as well as aligning themselves with the goals, values, or meaning of an activity (Larson, 2006; Dawes & Larson, 2011). This may promote adolescents' self-efficacy as agents of development. Furthermore, reflection may help youth have "access [as] an actor [to] his or her own internal states versus [be influenced by] an observer's reliance on external conditions in the understanding of other's behavior" (Ryan & Connell, 1989, p. 749) which may promote autonomous and self-determined functioning.

#### *Conceptual Model, Dissertation Roadmap, Research Questions, and Hypotheses*

A summary is now provided of what will be addressed in each chapter of the dissertation. Each chapter addresses one set of relations in the conceptual model

provided in Figure 2, such that the conceptual model may also serve as a roadmap for what is to follow in this paper. Though there is evidence that each of the factors of interest in this investigation (i.e., activity participation, autonomous motivation, well-being, participant characteristics) are related to one another, those relations described above are of particular interest to this investigation. Furthermore, while there is some evidence that relations flow from activity participation to autonomous motivation and then to well-being, it is also possible that autonomous motivation may be influenced by youths' selection into activities, suggesting that the relationship flows in that direction as well. While there were enough youth participants in the sample ( $n = 868$ ) to test a mediational model, which would have provided evidence about causality, the decision was made to not do this because the data upon which these results are based are cross-sectional which would leave too much room for interpretation.

## Chapter 1: Introduction

In this chapter (Chapter 1), we reviewed some of the major findings on school activities and community programs as context for development, and identified major gaps in the literature including the need to understand mechanisms of development that link participation to youth outcomes, and to assess how relation between factors may differ depending upon the individual and family characteristics of diverse youth. Autonomous motivation was highlighted as one potentially important mechanism of development that warrants further examination. Key features of program participation that may be particularly important for promoting youths' autonomous motivation, particularly among the most economically disadvantaged youth, were highlighted. The importance of exploring youths' reflective practices about their program participation and investigating their relationship with autonomous motivation were discussed.

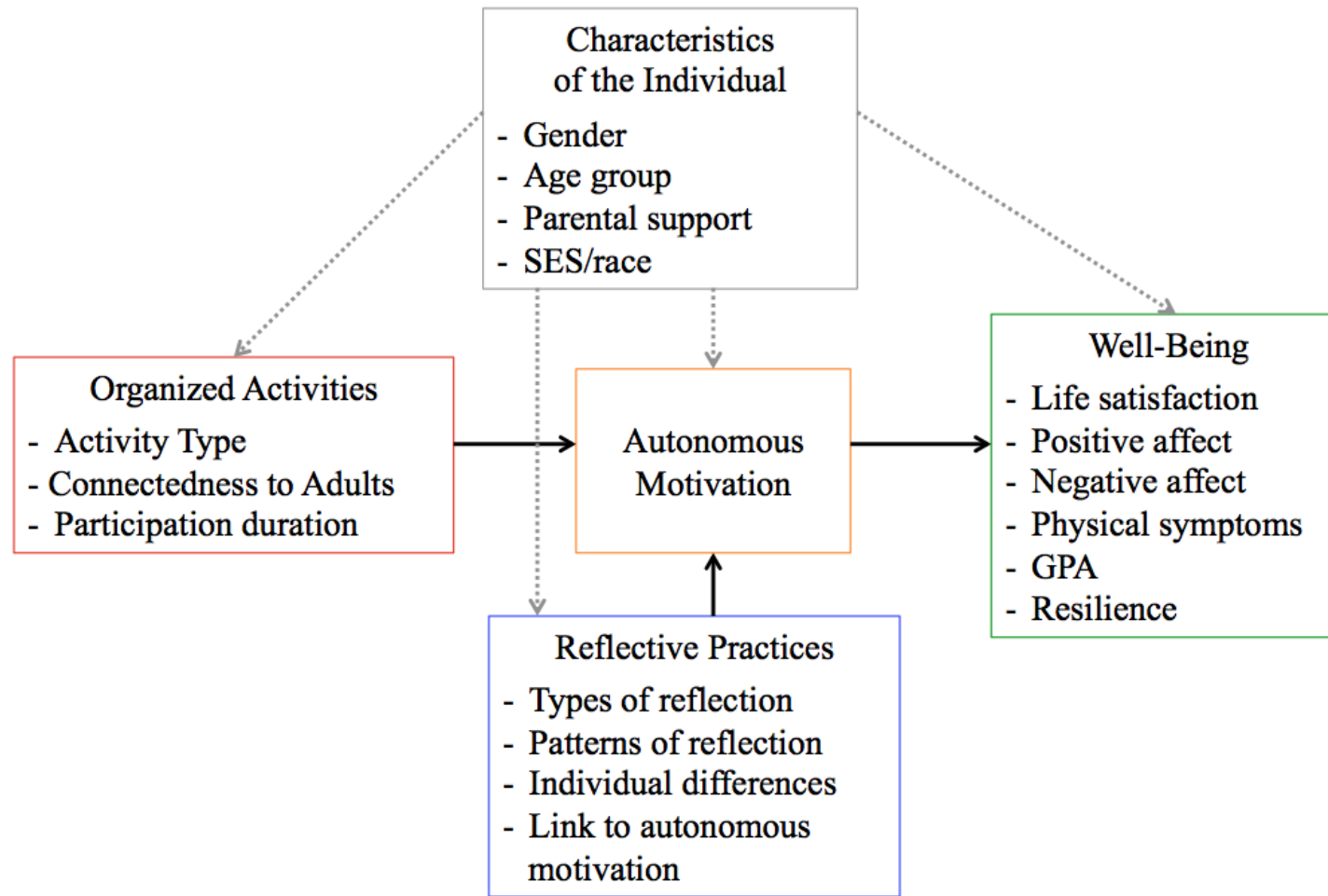


Figure 2. *The Conceptual Model for the Overall Investigation.*



## Chapter 2: Method

Chapter 2 will describe the methods of the current investigation. Included in this chapter are a description of the background of the study, as well as the study participants, design, and procedures. Chapter 2 also describes all of the measures used in this investigation, presents descriptive statistics for all study variables, and summarizes the overall plan of analysis.

## Chapter 3: Describing Program Participation in this Sample of Adolescents

Chapter 3 provides a picture of school activity and program participation in this sample of adolescents. Specifically, activity participants are compared to those not participating in any activity in terms of their participant characteristics (i.e., gender, age group, parental support, SES/race) and indicators of well-being (i.e., life satisfaction, positive affect, negative affect, physical symptoms, GPA, ego-resilience). Furthermore, differences in three key features of activity participation (i.e., activity type, connectedness to adults in one's activity, participation duration) by participant characteristics are also assessed.

### *Chapter 3 Research Questions and Hypotheses*

*Research Question 1:* Do activity participants differ from those not participating in any activity in terms of:

- a) Participant characteristics (i.e., gender, age group, SES/race, parental support)
- b) Indicators of well-being (i.e., life satisfaction, positive affect, negative affect, physical symptoms, GPA, psychological resilience)

*Hypothesis 1b:* Activity participants will be associated with more favorable outcomes compared to those not participating in any activity. Specifically, a greater proportion of high SES youth (both White and non-White) and youth with higher parental support are expected among

activity participants vs. non-participants. Activity participants are expected to report significantly higher well-being (i.e., life satisfaction, GPAs, and psychological resilience, and lower negative affect and physical symptoms) compared to those not participating in any activity.

*Research Question 2:* How does the nature of activity participation differ for youth with different participant characteristics regarding the following features of activity participation?

- a) Activity type (i.e., sport, performing and fine arts, academic clubs, faith-based/community/service programs)
- b) Connectedness to adults in one's activity

*Hypothesis 2b:* Youth with higher parental support will report significantly higher connectedness to adults in one's activity than youth with lower parental support.

- c) Participation duration

#### Chapter 4: Key Features of Activity Participation and Autonomous Motivation

The aims and objectives of Chapter 4 are to assess relations between the same key features of activity participation (i.e., activity type, connectedness to adults in programs, participation duration) and autonomous motivation, and assessing the potential moderating effects of individual and family characteristics on these relations.

#### *Chapter 4 Research Questions and Hypotheses*

*Research Question 3:* Do youth participating in different types of activities report significantly different levels of autonomous motivation?

*Research Question 4:* How does connectedness to adults in one's program relate to autonomous motivation?

*Hypothesis 4:* Youth reporting higher connectedness to adults in their program will report significantly higher autonomous motivation than youth with lower connectedness to adults in their program.

*Research Question 5:* How does participation duration relate to autonomous motivation?

*Hypothesis 5:* Youth reporting participation duration will report significantly higher autonomous motivation than youth with lower participation duration.

*Research Question 6:* Do youth with varying levels of connectedness to adults in their program (high vs. low) and participation duration (high vs. low) report significantly different levels of autonomous motivation?

*Hypothesis 6:* Youth with high connectedness and high participation duration will report significantly higher autonomous motivation compared to other participant groups (i.e., high connectedness but low duration, low connectedness but high duration, low connectedness and low duration).

## Chapter 5: Relations Between Autonomous Motivation and Well-Being

Chapter 5 investigates links between autonomous motivation and indicators of adolescent well-being (i.e., life satisfaction, positive affect, negative affect, physical symptoms, psychological resilience, GPA).

### *Chapter 5 Research Questions and Hypotheses*

*Research Question 7:* How does autonomous motivation in programs relate to indicators of adolescent well-being, specifically in terms of the following indicators of well-being:

- a) Life satisfaction
- b) Positive affect

- c) Negative affect
- d) Physical symptoms
- e) GPA
- f) Ego-resilience

*Hypothesis 7:* Autonomous motivation will be positively associated with life satisfaction, positive affect, GPA, and ego-resilience, and will be negative associated with negative affect and physical symptoms.

## Chapter 6: The Nature of Youth Reflection and Autonomous Motivation

In Chapter 6, the nature of youths' engagement in self-reflective practices about program experiences is explored. Specifically, patterns of youth reflection about their program experiences are assessed, individual and family characteristics that are significantly associated with greater odds of engaging in a particular reflective pattern compared to other reflective patterns are identified, and relations between different reflective patterns and autonomous motivation are tested.

### *Chapter 6 Research Questions*

*Research Question 8:* What types of reflective practices do youth engage in about their program experiences?

*Research Question 9:* Can distinctive patterns of reflection about program participation be identified? If so, what do these patterns of reflection look like?

*Research Question 10:* Are there certain participant characteristics that are associated with greater odds of engaging in a particular reflective pattern?

*Research Question 11:* Do youth with different reflective patterns report significantly different levels of autonomous motivation?

## Chapter 7: Conclusions

In Chapter 7, the final chapter of the dissertation, the major findings from this investigation are presented, and greater insights are sought by situating findings in the

context of other research and theory. Limitations of the current investigation are discussed, and recommendations for future research are made. Finally, the many findings gleaned from this study are integrated, and the full picture is assessed in service of making key recommendations for policy and practice.

## CHAPTER 2

### Method

#### *Background*

The Afterschool Community Empowerment (ACE) Project took place in the fall of 2009 at Binghamton High School (BHS). BHS is located in the downtown region of Binghamton in the state of New York. Thirty percent of Binghamton's inhabitants were documented as living below the poverty level between 2007-2010, a figure which is much higher than the 15% of New York State residents living below the poverty level (US Census Bureau, 2011). The high school hosts 1,650 students, with a student to teacher ratio of 13:1. While BHS is the only high school in the Binghamton City School District, there are two neighboring high schools that belong to Chenango Forks Central School District. A comparison of the 3 high schools (U.S. News & World Report, 2014) shows that while BHS has a total minority enrollment of 42% and a 2014 college readiness index of 19.2, Chenango Valley High School located within a 9-minute drive of BHS has a total minority enrollment of 6% and a college readiness index of 14.1. Chenango Forks High School, located within a 15-minute drive from BHS, has a total minority enrollment of 5% and a college readiness index of 22.7.

The purpose of the ACE Project was to investigate the nature and quality of adolescents' participation in school and community programs, and to examine relations between program participation and key proximal as well as distal outcomes. The study also set out to identify youths' patterns of reflective practices about their program experiences, and to assess relations between reflective practices and youth outcomes.

Data was collected at Binghamton High School for several reasons. Since one aim of this investigation was to assess activity participation rates, processes, and

outcomes among lower income ethnically diverse youth, a high school with a high proportion of low-income youth was sought. Binghamton High School was recommended as a potential site for data collection by a Senior Research Associate at Cornell University who facilitated connections between the primary investigator, the Binghamton Youth Bureau (located across the street from BHS), and the BHS Principal. BHS was also selected because the type of data being collected (i.e., school-wide survey, a 14-day daily on-line survey) required a high degree of on-site staff presence (e.g., daily school-wide announcements), engagement with students (e.g., posters and daily raffle prizes), and cooperation with BHS staff. Thus, the research staff from Cornell University in Ithaca, NY, needed to be within driving distance of where data was being collected.

### *Participants*

All 1198 study participants (73% of the total BHS student body) were current 9<sup>th</sup>-12<sup>th</sup> grade students at BHS. Truancy is an issue at BHS, and though data from all 1650 students were sought, 450 students were either missing from school or from PE class over the 3 days in which the school-wide survey was collected. Data was not available for those students missing from school and/or class on days in which those data were collected, thus obviating comparisons between these youth and study participants.

In terms of the characteristics of the study sample, 52% (n = 628) of participants were female. Participant age ranged from 13-19 years old (M = 15.68), with a slightly higher number of 9<sup>th</sup> graders (n = 348, 29%) and 10<sup>th</sup> graders (n = 289, 24%) than 11<sup>th</sup> (n = 282, 24%) and 12<sup>th</sup> graders (n = 274, 23%). Table 3 compares the ethnic/racial diversity of the city, school, and study sample. The comparison shows a smaller proportion of White youth in the study sample compared to the proportion of White students at BHS and White people living in the city of Binghamton. There is

also a greater proportion of African American youth at BHS and in the study sample compared to the city of Binghamton. The proportion of Latino/Hispanics and Asian/Asian-Americans was similar across contexts.

Table 3. *The Ethnic/Racial Make-Up of the City of Binghamton, Binghamton High School, and the Study Sample.*

Ethnicity/Race	City of Binghamton	Binghamton High School (BHS)	Study Sample
White/European American	78%	63%	56%
Black/African American	11%	25%	24%
Hispanic/Latino	N/A	7%	7%
Asian/Asian-American	5%	4%	4%

Public records show that about 684 (41%) of BHS students are eligible for the free lunch program, while 125 (8%) of students are eligible for the reduced lunch program (Public Schools K12, 2013). These figures are a bit higher compared to youths' self-report data in this study, gathered in 2009, showing 40% ( $n = 628$ ) of study participants were participating in free and/or reduced lunch. Overall, results show a higher proportion of residents living below the poverty line in the city of Binghamton, compared to NY State, and that BHS students who make up the study sample are at an even greater level of economic disadvantage than those in the city of Binghamton.

### *Study Design*

The study entailed two parts. The first part was a school-wide paper-pencil self-report survey that was distributed to all BHS students. The school-wide survey was used to collect identifying information, demographic data, and information about students' participation in the 147 activities and programs available at BHS and the surrounding community. This survey also inquired about program processes (e.g., connectedness to adults) in the one activity youth identified they were most engaged in



or spent the most time in (i.e., their Target Activity), as well as proximal (e.g., autonomous motivation in programs) and distal youth outcomes (e.g., well-being).

The second part of the study was a 14-day on-line daily diary survey assessing daily measures of activity participation, reflective practices, stress, and well-being. All students were invited to participate in this part of the study. However, in order to participate, students were required to provide their name, email, and phone number on the school-wide survey so that the research staff could provide daily reminders and follow-ups with students.

### *Procedure*

Prior to data collection, both the school-wide survey and the daily on-line survey were piloted with local Ithaca high school students and with Cornell undergraduate students, which resulted in some minor changes, including the simplification and clarification of language, as well as the editing and addition of items capturing youths' reflective practices about their program experiences. All BHS students were introduced to the study during physical education (PE) class which all students attended every two school days. Passive parental/youth consent was used such that students were asked to return the consent form if they chose to opt out of the study, or if their parent/guardian did not grant them permission to participate in the study. Nine consent forms were returned to a box in the school administrative office. Participant incentives included candy and a ticket for raffles held at the end of each class period. Prizes included gift certificates (i.e., movie tickets, ice cream, clothing stores, video games), study t-shirts, and candy prizes. In addition, an iPod Nano was raffled off at the end of each day of data collection.

The school-wide survey was distributed to all students during PE class in the BHS cafeteria by the principal investigator and 10 undergraduate research staff with backgrounds in psychology and other related fields after they had received a 3-day

training in data collection techniques. Data collection was temporarily halted on Day 1 of data collection after the 4th class period. Though the survey had been pre-approved by the BHS Principal, District Superintendent, and Cornell University's Institutional Review Board, changes to the survey were required to be made by the District Superintendent and BHS Principal before data collection could be resumed.

Changes to the school-wide survey mainly had to do with removing or altering items that were thought to be potentially upsetting to students as they completed the questionnaire. Changes included the deletion of a few items (e.g., "In the last month, I thought about suicide"), and the deletion of the Trait Self-Determination Scale (Sheldon & Deci, 1996) which was necessary for assessing individual differences in the extent to which people tend to function in a self-determined way. Appendix A includes all omitted or edited items. Questions asking for student's identifying information (i.e., name, phone number) were also removed, which presented challenges to collecting the daily on-line data. For example, daily follow-ups with students could not be made by phone, but only by email. Thus, while daily diary data was collected, inconsistent responses prevented the use of this data, so results presented in this paper are based on cross-sectional data collected with the school-wide survey. This method section discusses the procedures and measures pertaining to that survey.

The 1-week break between collecting data from Sample 1 (original school-wide survey) and Sample 2 (revised school-wide survey) allowed the research staff to make improvements to the data collection process. For example, an edited cover sheet that more clearly stated the project goals and reiterated the voluntary nature of students' participation in the study was included in the edited Sample 2 survey (Appendix B). Upon arriving to the cafeteria to complete the survey, students were grouped by last name, helping to minimize distractions as youth were unable to sit

with their friends. Directly communicating the study aims and objectives of the project to BHS teachers, counseling staff, and administrative staff contributed to greater cooperation, more efficient data collection procedures, and student engagement.

Sample 1 included 250 students (21% of total sample), while Sample 2 included 948 students (79% of total sample). Independent t-tests showed the individual and family characteristics for youth whose data was collected in Sample 1 did not significantly differ from youth whose data was collected in Sample 2 by gender, GPA, and SES, but youth in Sample 1 vs. Sample 2 did significantly differ by age,  $t = 5.55, p < .0001, df(1, 1173)$ , with a higher number of older youth ( $M = 16.05$ ) in Sample 1 vs. Sample 2 ( $M = 15.57$ ).

### *Measures*

All study variables are listed in Table 4, with descriptive statistics provided for all continuous variables, and frequencies and percentages provided for each categorical variable. All measures are provided in Appendix C.

#### *Activity Participation Variables*

Students' current participation in school and community activities, as well as their participation in any school or community activity during the past 3 years, was inventoried following the procedures of Larson et al. (2006). Students were presented with a complete list of the 142 school activities and community programs offered at school or in the community that had been gathered from the BHS administrative staff and the Binghamton Youth Bureau (Appendix D). Students were asked the following questions regarding each activity or program they were currently participating in or had participated in during the last 3 years: (a) "Do you participate in this activity during the school year? (b) "Do you participate in this activity during the summertime?" and (c) "How much experience do you have in this activity

Table 4. Frequencies and Descriptive Statistics for Participation, Outcome, and Participant Variables

Variable type		Frequencies		Descriptive statistics			
Variable		N	%	Mean	SD	Min	Max
Adolescent well-being							
	Satisfaction with life			25.38	6.85	5.00	35.00
	Physical symptoms			1.54	1.64	0.00	10.00
	Positive affect			13.60	5.85	0.00	25.00
	Negative affect			7.63	3.58	0.00	25.00
	Psychological resilience			43.30	7.04	14.00	56.00
	GPA			87.61	10.25	20.00	109.00
Proximal outcome							
	Autonomous motivation			33.14	8.64	6.00	42.00
Activity participation							
	Participation vs. no participation						
	Participating	329	27.5				
	Not participating	869	72.5				
	Participation duration			1.90	0.86	0.28	4.12
	Connectedness to adults			29.40	5.63	7.00	35.00
	Activity type						
	Sports	435	36.30				
	Performing & fine arts	158	13.20				
	Community/faith-based	109	9.10				
	Academic clubs	113	9.40				
Individual and Family Characteristics							
	Gender						
	Male	560	46.70				
	Female	628	52.40				
	Age			15.68	1.22		
	13-15 year olds	556	46.40				
	16-19 year olds	619	51.70				
	SES/Race						
	High SES White	464	38.70				
	High SES Non-White	271	22.60				
	Low SES White	180	15.00				
	Low SES Non-White	211	17.60				
	Parental support			22.44	6.19	6.00	30.00

(e.g., 1 year, 3 months)?” For yes/no questions, responses were coded (1 = *yes*, 0 = *no*). While the set of questions was intended to capture a holistic picture of youths’ participation, only some of these questions (and their corresponding answers) are applicable to the current investigation. These measures are explained in greater detail below.

#### *Current Participation in an Activity or Program*

Each student indicated whether they were currently participating in any of the 142 programs listed on the activity inventory. Current participation in an activity or program was indicated using a binary coding system (1 = *currently participating in this activity*, 0 = *not currently participating in this activity*).

#### *Target Activity*

After youth completed the activity inventory they were asked to, “Please select the ONE activity or program you have been most involved in or have spent the most time in since the beginning of this school year.” Students were asked to write down the name of the activity or program in the provided space (e.g., football team), and then asked to respond to a series of questions regarding their participation in that activity. Of the 1198 total study participants, 858 youth (72%) reported on their current involvement in a school activity or community program.

#### *Activity Type*

While the 142 activities and programs were initially sorted into 1 of 6 types of activities based on groups identified in the literature (e.g., Larson et al., 2006; Eccles & Barber, 1999; Elder & Conger, 2000) (i.e., sports, performance and fine arts, academic clubs and organizations, community-oriented activities, service activities, and faith-based youth groups), because there were so few youth reporting on experiences in community programs ( $n = 62$ ), service activities ( $n = 17$ ), and faith-based programs ( $n = 30$ ), and these activity types were more similar to each other

(e.g., church groups focused on tutoring and service opportunities), relative to other activity types, these groups were collapsed into one larger activity type called *community/service/faith-based programs*. Thus, each participants' Target Activity was coded using the following coding scheme: 1 = *sports*, 2 = *performance and fine arts*, 3 = *academic clubs*, and 4 = *community/faith-based programs*. For the purposes of using more succinct labels in the remainder of this paper, the "community/service/faith-based programs" group is referred to as "community/faith-based programs". Youths' experiences in work, either paid or unpaid, were also accounted for with use of the activity inventory, following the procedure of Larson et al. (2006). However, only 57 youth (4% of total activity participants) reported on work experiences, which constituted such a small percentage of the overall sample of activity participants that these responses were not included in the current analysis.

#### *Participation Duration*

The duration of youths' participation in their Target Activity was calculated based on each participant's response to the question, "How much experience do you have in this activity (e.g., 1 year, 3 months)?" ( $M = 1.90$ ,  $SD = .86$ ).

#### *Connectedness to Adults in an Activity or Program*

Whitlock's (2007) 7-item measure of school connectedness was adapted to measure connectedness to adults in youths' Target Activity. The scale includes items that measure dyadic youth-adult relationships, the extent to which individual youth respondents feel they and other youth are respected, trusted, and cared for by the collective community of adults and institutions, and the extent to which youth care about and trust adults in their program (e.g., "Adults in my program care about people my age," "I care about the program I go to"). Youth responded to items on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 3 (*not sure*) to 5 (*strongly agree*) ( $\alpha = .89$ , 7 items). Responses to the 7 items were summed ( $M = 29.40$ ,  $SD = 5.63$ ).

## Outcome Variables

### *Autonomous Motivation in One's Activity or Program*

The 15-item Self-Regulation Questionnaire captures 5 degrees of internalization in specific domains (e.g., sports) (Deci & Ryan, 2002; Ryan & Connell, 1989) and was adapted for this study to measure how autonomously motivated youth are about their program participation. While the 20-item version of the SRQ (4 items per subscale) has been used in many studies with adolescents and college students (e.g., Vansteenkiste et al., 2009), the 3-item per subscale short-version of the SRQ was selected for use with this sample. Piloting the survey with local high school students indicated that the length of the overall survey and the reading level of youth participants presented issues with data collection. Therefore, the short versions of all measures, including the short version of the ASR-Q were selected.

After reading the question, “Why do you participate in your activity or program?” youth were presented with a series of statements (e.g., “For the pleasure of discovering new skills”) which they were asked to rate on a 7-point Likert scale from 1 (*not true at all*) to 7 (*very true*). While both the autonomous subscale (6 items,  $\alpha = .90$ ) and the controlled subscale (6 items,  $\alpha = .74$ ) were adequate for use with this sample, preliminary findings showed no significant relationship between the controlled subscale and the key activity participation or outcome variables used in this study. Thus, because of the large number of variables used in this investigation and the large amount of evidence that supports autonomous motivation as a potential mechanism of development in the link between program participation and well-being, (e.g., Lerner et al., 2010; Deci & Ryan, 2002), the investigatory lens was focused on relations between autonomous motivation and the other key study variables.

The Autonomous Motivation subscale was calculated by summing the scores for the 3 items measuring identified regulation (e.g., “I learn valuable lessons from

participating in my activity”) and the 3 items measuring intrinsic regulation (e.g., “I participate in my activity for the pleasure of discovering new skills”). The 6-item subscale was found to be highly reliable with this sample (6 items,  $\alpha = .90$ ) ( $M = 33.14$ ,  $SD = 8.64$ ).

Development of the Self-Regulation Questionnaire (SRQ). Ryan and Connell (1989) first developed the Self-Regulation Questionnaire (SRQ) to measure domain-specific (i.e., school work, prosocial behavior) individual differences in types of motivation or regulation among late elementary and middle school children, as well as adolescents. Connell’s (1985) multidimensional measure of children’s perception of control, including the psychometric properties of the measure’s subscales, served as a foundational piece for Ryan and Connell’s (1989) seminal paper.

The original psychometric properties for the SRQ were presented in a seminal paper by Ryan and Connell (1989). A large body of research was drawn upon as theoretical grounding for the development of the scale. This included Heider’s (1958) concept of perceived locus of causality (PLOC), as well as deCharms (1968) distinction of internal PLOC (“actor is perceived as an ‘origin’ of his or her behavior”; Ryan & Connell, 1989, p. 749), and external PLOC (“actor as a ‘pawn’ to heteronomous forces; Ryan & Connell, 1989, p. 749). DeCharms’ (1968) contribution accounts for “the access an actor has to his or her own internal states versus an observer’s reliance on external conditions in the understanding of others’ behavior” (Ryan & Connell, 1989, p. 749). Another important issue Ryan and Connell (1989) wanted to account for in the development of the SRQ were those:

forces within the person [that] may be experienced as compelling or heteronomous, and thus would not be appropriately described as having an internal locus of causality, even when environmental pressures are absent... when one feels one should or must behave in a given way, rather than feeling



that one wants to or chooses to... forces are experienced as ‘acting on’ the self, in contrast to the experience of the self as the origin and initiator of action (p. 750).

Thus, these theories, taken together, suggest that self-perceptions of the causes or reasons for behavior can be differentiated along a continuum representing levels or gradations of autonomy.

The gradation in the experience of perceived causality, Ryan and Connell (1989) point out, is emphasized in theories of internalization. This includes theories from fields of study including client centered therapy (Rogers, 1965), psychoanalysis (Meissner, 1981), social-control processes and social values (Lepper, 1983), and compliance, identification, and internalization with regards to attitude change (Kelman, 1958). Theoretical support for each of the self-regulatory styles is also provided. For example, in the case of the self-regulatory style of introjection, Meissner’s (1981) notion of a former external regulation or value has been “taken in” and is now carried out based on pressures such as guilt or anxiety. Connell and Ryan (1989) highlight the need for empirical methods to examine these degrees of internalization that are “meaningfully placed along a continuum of autonomy, or of self-causality” (p. 750).

Ryan and Connell’s (1989) item-generation process entailed surveying elementary school teachers to develop behavioral categories (i.e., doing homework, working on classwork, answering questions in class, doing well in school). Informal one-on-one interviews were also conducted with children to gather reasons for their behavior. Four categories of reasons for academic achievement were developed based on the interview data and a priori conceptualizations. An initial pilot test of the achievement model was conducted with 355 suburban elementary school children (sample 1) who responded to a set of “why” questions concerning four sets of

behaviors on a scale from 1 (not at all) to 4 (very true). From this initial survey, reasons that fit the general pattern of external, introjected, identified, or intrinsic reasons were identified. Eight reasons that had insufficient variability or didn't fit the model were dropped.

The second examination of reasons for achievement involved 112 urban 4<sup>th</sup>-6<sup>th</sup> graders from lower and middle-class families (65% non-White) (sample 2), 450 rural 3<sup>rd</sup>-6<sup>th</sup> graders from middle- to upper-middle-income White families (sample 3), and 156 suburban 3<sup>rd</sup>-6<sup>th</sup> graders (sample 4). All children completed the 26-item "reason" survey generated by the pilot study. The first set of results showed internal consistency estimates for each reason category ranging from .62 to .82, indicating moderate to high levels of internal consistency across all three samples. Furthermore, the proposed continuum of autonomy was verified; those categories adjacent with one another (based on theory) were more highly correlated, compared to those categories that were more theoretically distant from other another. The presence of the four factors was confirmed with use of the simplexlike correlation model, a factor analytic approach (Guttman, 1954). Internal consistency (reliabilities) indicated "the simplex pattern was not a function of different reliabilities" (Ryan & Connell, 1989).

An alternative factor analytic approach was also used to test the model. This was important considering PLOC is typically considered a single dimension or contrasts extrinsic/external vs. intrinsic/internal motives, which often times leaves out the "middle-ground" of motivational states (Ryan & Connell, 1989). Exploratory factor analysis was run using the 26-items with the largest sample (sample 4 made up of 450 rural 3<sup>rd</sup>-6<sup>th</sup> graders). Middle-ground items (i.e., introjected and identified) showed a cross-loading pattern. With a cutoff of .45 for inclusion in the scale and .3 for maximum cross-loading, two subscales were identified. The External subscale

included 5 external category items and 1 introjected item. The Internal subscale consisted of 4 intrinsic, 3 identified, and 1 introjected item. The two subscales demonstrated “good discriminant validity and related meaningfully to external criteria. However, meaningful psychological categories would fail to be considered because of the procrustean bed of this factor analytic approach” (Ryan & Connell, 1989, p. 753). Findings suggest that the discriminant validity will be less robust in some cases compared to the 2-factor approach. Ryan and Connell (1989) argue that lower discriminant validity between categories that are more similar to each other and greater discriminant validity between categories less similar to each other supports conceptualizing the PLOC model as a graded continuum of levels.

External validity was also tested with use of the three samples regarding academic (cognitive) outcomes. Results showed that the mastery motivation subscale (18 items) of the Intrinsic Versus Extrinsic Orientation in the Classroom Scale (Harter, 1981) was positively correlated with the Identified and Intrinsic reasons for achievement, and negatively correlated with the External reason for achievement. The same pattern was found using deCharms’ (1976) 28-item Origin Climate Questionnaire assessing the perception of being a “pawn” in the classroom vs. the “origin” (having autonomy) of one’s behavior. Connell’s (1985) 48-item measure of perceived control (Multidimensional Measure of Children’s Perceptions of Control) was strongly related to the Introjected and Identified reasons for achievement categories (middle categories) in the urban and suburban samples, and less strongly related to the intrinsic or external categories. Discriminant validity was also demonstrated by relating children’s endorsement of reasons for achievement with mother-, father-, and teacher-rated motivation of the children using a 16-item questionnaire.

The last set of analyses assessing this graded model of internalization in regards to children's engagement in academic behaviors related the categories (e.g., identified, intrinsic) to coping, anxiety, effort, and enjoyment. With regards to relations with subscales from the Children's Academic Coping Inventory (Tero & Connell, 1984), results showed positive coping (actively seeking to remedy the cause(s) of poor performance) was positively related to all 3 non-external categories, while projection (blaming teacher) and denial (anxiety amplification) were related (in 2 of the 3 samples) to the external reason category. Finally, anxiety amplification (worrying) was most strongly related to the introjected category. A similar set of analyses were run to assess this model in the prosocial domain.

Use of the SRQ and Autonomous Motivation Subscale. Since Ryan and Connell's (1989) creation of the Self-Regulation Questionnaire, the measurement tool has been used to study motivation in a wide array of domains including, but not limited to religion (Ryan, Rigby, & King, 1993), relationships (Blais, Sabourin, Boucher, & Vallerand, 1990), and health care (Ryan, Plant, & O'Malley, 1995). Vansteenkiste et al. (2009) highlight SDT's multidimensional view of the concept of motivation that "distinguishes the quantity, amount, or intensity of motivation from the quality or type of motivation" (p. 671). Furthermore, SDT's conceptualization of motivation differs from theories that approach motivation as more of a "unitary, quantitative construct" which suggests that, "a higher amount of motivation should yield more optimal outcomes (e.g., Bandura, 1989; expectancy-value theory; Eccles & Wigfield, 2002). SDT, in contrast, suggests that higher levels of motivation do not necessarily yield more desirable outcomes if the motivation is of poor quality" (Vansteenkiste et al., 2009, p. 671-672) (e.g., controlled motivation).

Because of the widespread use of the SRQ, Deci and Ryan (2014) underscore the importance of considering how the existing questionnaire is adapted when the

SRQ is used to answer new research questions. Deci and Ryan (2014), as well as Loevinger (1957), agree that if psychological tests and surveys are to aid in theory development, constructs require adaptation as the research question changes, and underscore the importance of remaining true to the concept and validating adaptations fully.

Selecting a version of the SRQ depends upon the research question(s) and the sample under investigation. Versions of the SRQ also differ in their number of subscales. These factors also influence how the questionnaire is scored (Deci & Ryan, 2009). Several studies using the SRQ created a composite score for controlled regulation by averaging the external and introjected items, and created an autonomous motivation score by averaging the identified and intrinsic items (Pelletier et al., 2001; Vansteenkiste et al., 2009). Vansteenkiste et al. (2009) used the adapted Academic Self-Regulation Scale (Ryan & Connell, 1989) to examine motivational profiles from an SDT perspective among 291 12<sup>th</sup> graders. The 16-item scale was shown to have satisfactory internal consistency: intrinsic motivation (4 items,  $\alpha = 0.89$ ), identified regulation (4 items,  $\alpha = 0.79$ ), introjected regulation (4 items,  $\alpha = 0.69$ ), and external regulation (4 items,  $\alpha = 0.77$ ). Since full integration of a behavioral regulation is unlikely to have occurred in childhood or adolescence, scales used with children and adolescents do not have an integrated subscale (Deci & Ryan, 2009). Results of a principal components factor analysis showed a clear drop in eigenvalues between the second and third factor. The first two components, together, explained 48% of the variance in motivation items. After oblique rotation (PROMAX), all autonomous motivation items had loadings of at least .40 on the first factor, and all controlled motivation items had loadings of at least .40 on the second factor. Autonomous and controlled motivation were unrelated.

Vansteenkiste, Lens, De Witte, and Deci (2004) used the composite scores for controlled motivation and autonomous motivation to study job-search motivation among adults enrolled in a Belgian employment assistance welfare program. In their study of motivational predictors of weight loss and weight-loss maintenance, autonomous behaviors “for which the regulation is experienced as chosen and as emanating from one’s self, in other words, as having an internal perceived locus of causality” were distinguished from controlled behaviors or those “for which the regulation is experienced as pressured or coerced by some interpersonal or intrapsychic force (they have an external perceived locus of causality)” (Williams et al., 1996, p. 116). Results of a factor analysis of the adapted SRQ revealed two factors that were labeled Controlled Reasons (6 items) and Autonomous Reasons (3 items).

Many studies have used the Relative Autonomy Index (RAI; Grolnick & Ryan, 1989) based on a sum score of the weighted external, introjected, identified, and intrinsic scales (based on a factor analytic approach called the simplex structure of the measure; Guttman, 1954). Grolnick and Ryan (1987) used the 26-item SRQ and RAI to assess individual differences in the degree to which children are self-determined regarding school-related behaviors (e.g., homework, classwork, answering questions in class).

Niemiec et al. (2006) used the SRQ (Ryan & Connell, 1989) to test whether autonomous reasons for going on to college mediated perceived need support from parents and well-being (i.e., vitality, life satisfaction, depressive symptoms, externalizing behaviors) among 140 Belgian adolescents. Autonomous motivation for planning to attend college was a significant partial mediator of the relationship between adolescents’ perceived need support from parents to well-being. The external (3 items,  $\alpha = 0.74$ ), introjected (3 items,  $\alpha = 0.75$ ), identified (3 items,  $\alpha = 0.77$ ), and intrinsic regulations (3 items,  $\alpha = 0.91$ ) were assessed using a 5-point Likert-type

scale. They also used the Relative Autonomy Index (RAI) by combining the subscales into an overall autonomy score. Soenens et al. (2012) also used the adapted SRQ (Ryan & Connell, 1989) and the RAI to examine the outcomes, antecedents, and mediators in regard to psychologically controlling teaching among 533 Belgian adolescents. In an earlier study, Soenens and Vansteenkiste (2005) also used the RAI in demonstrating that autonomy-supportive parenting is positively associated with autonomous motivation for school and job-seeking which contributes to more positive adjustment (i.e., social acceptance, GPA).

In addition, Levesque, Zuehlke, Stanek, and Ryan (2007) validated the structure of the adapted SRQ for treatment domains, but found a 4-factor structure was supported across 6 data sets from 6 different treatment sites. Pelletier et al. (1995) validated an adapted version of the SRQ related to motivation in sports, which was used in a study with roughly 400 Canadian competitive swimmers (mean age = 15.6 years), resulting in a 3-factor conceptualization of reasons for participation: intrinsic, extrinsic, and amotivated (Pelletier, Fortier, Vallerand, & Ryan, 2001).

Thus, while those with either controlling or self-determined motives are both capable of regulating behavior (Deci & Ryan, 2002), the advantages of self-determined autonomous motivation (vs. controlled motivation) include deeper information processing, higher performance, maintained persistence, and higher well-being (e.g., Black & Deci, 2000; Vallerand et al., 1997; Vansteenkiste & Deci, 2003; Williams, McGregor, Zeldman, Freedman, & Deci, 2004). A recent study by Legault & Inzlicht (2013) showed, in a sample of Canadian college students, that autonomy, as conceptualized by the SRQ (Ryan & Connell, 1989), improves performance on tasks related to basic self-regulation (i.e., managing circumstances and impulses) (e.g., the Go/No-Go task) by enhancing neuroaffective responsiveness to self-regulation failure, what they call the error-related negativity (ERN).

### *Adolescent Well-Being*

Well-being is important to consider when studying the risk and protective factors (e.g., community resources; Morrissey & Werner-Wilson, 2005) that influence youths' physical (e.g., higher blood pressure; Southard et al., 1986) and socioemotional (e.g., greater likelihood of externalizing/internalizing problems; Gershoff et al., 2003) development. Aspects of activity participation (e.g., self-defining activity participation; Palen & Coatsworth, 2007), autonomous motivation (Soenens et al., 2007), types of reflection (e.g., Lyubomirsky et al., 2006), and the processing of positive emotions (e.g., Fredrickson, 2001) have been associated with increased well-being. Though there are several approaches to the study of well-being, including those approaches used in studies with adolescents (e.g., Yip & Fuligni, 2002; Palen & Coatsworth, 2007) and experimental disclosure (Lyubomirsky et al., 2006), since Self-Determination Theory's concept of autonomous motivation is central to this investigation, this study adopts SDT's eudaimonic approach to well-being (Deci & Ryan, 2002; Reis et al., 2000) which include life satisfaction, positive/negative affect, and physical symptoms (Diener, Emmons, Larsen, & Griffen, 1985).

The benefits of activity participation, however, are likely to be associated with other aspects of adolescent well-being, such as GPA and psychological resilience. Regarding academic outcomes, youth from poor urban communities are more likely than those from equally poor households in better neighborhoods to have lower high school academic achievement (Leventhal & Brooks-Gunn, 2004). Activity involvement has been linked to higher grades, test scores, school value, school engagement, and educational aspirations (Eccles & Barber, 1999; Fredricks & Eccles, 2005, 2006; Marsh & Kleitman, 2002). Autonomous motivation and written disclosure (reflection) about a traumatic event have both been shown to be associated



with improved GPA (Patrick, Anderman, & Ryan, 2002; Ryan, Stiller, & Lynch, 1994; Black & Deci, 2000; Vansteenkiste et al., 2004; Pennebaker & Francis, 1996), while program participation has also been associated with higher psychological resiliency (Fredricks & Eccles, 2006; 2008). Thus, the following measures of adolescent well-being were assessed.

**Life satisfaction.** Participants completed the 5-item Satisfaction with Life Scale (Diener et al., 1985) to assess their life satisfaction (e.g., “I am satisfied with my life”), using a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Responses were summed (5 items,  $\alpha = 0.87$ ) ( $M = 25.38$ ,  $SD = 6.85$ ).

**Positive and negative affect.** Youth completed the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) consisting of 10 positive and 10 negative affective states (e.g., excited, proud, upset, afraid), indicating the extent to which they generally felt this way on a 5-point scale from 1 = *very slightly or not at all* to 5 = *extremely*. Responses were summed to create 2 scale scores: positive affect (5 items,  $\alpha = 0.84$ ;  $M = 13.59$ ,  $SD = 5.80$ ) and negative affect (5 items,  $\alpha = 0.75$ ), ( $M = 7.63$ ,  $SD = 3.51$ ).

**Physical symptoms.** The 9-item symptom checklist developed by Emmons (1991) includes the following list of symptoms: headaches, stomachache/pain, chest/heart pain, runny or congested nose, coughing/sore throat, faintness/dizziness, shortness of breath, acne/pimples, stiff/sore muscles, or other. These categories are selected based on factor-analytic work using a large list of physical sensations and symptoms (Pennebaker, 1982). Youth were asked to indicate whether they were experiencing that particular physical sensation or symptom that day (0 = *no*, 1 = *yes*). Responses to the 10 items were summed (10 items,  $\alpha = 0.60$ ) ( $M = 1.54$ ,  $SD = 1.64$ ).

**Ego-Resilience.** While psychological resilience was shown to be an important factor when assessing African American and European American youths' activity

participation (Fredricks & Eccles, 2008), this study adopted a more extensive measure of this construct with the Ego-Resilience Scale (Block & Kremen, 1996) which defines psychological resilience as, “the capacity of the individual to effectively modulate and monitor an everchanging complex of desires and reality constraints” (Block & Kremen, 1996, p. 359). Ong, Bergeman, Bisconti, & Wallace (2006) used this measure in a study about successful adaptation to stress. The scale consists of 14 items on a 4-point Likert scale, ranging from 1 (*doesn't apply at all*) to 4 (*applies very strongly*) (e.g., “I get over anger with someone reasonably quickly,” “I enjoy dealing with new and unusual situations”). Responses to the 14 items were summed (14 items,  $\alpha = 0.84$ ) ( $M = 43.30$ ,  $SD = 7.04$ ).

GPA. Self-reported Grade Point Average (GPA) was used as a measure of school performance. There is evidence that supports the use of self-reported school grades as an accurate reflection of the grades youth have actually obtained (Herman, Dornbusch, Herron, & Herting 1997). Self-reported GPA has been used in other studies of lower-income youths' activity participation (Pedersen & Seidman, 2005) ( $M = 87.61$ ,  $SD = 10.24$ ,  $\text{min} = 20.00$ ,  $\text{max} = 109.00$ ).

### Participant Characteristics

#### *Age Group and Gender*

Several participant and family characteristics were included as interaction terms and/or as covariates. *Age group* was calculated based on self-reported age (0 = *13-15 years old*, 1 = *16-19 years old*). *Gender* (0 = *male*, 1 = *female*) was also included.

#### *Race/Ethnicity and Socioeconomic Status (SES)*

Race/ethnicity was assessed based on youth's response to the question, “What is your race/ethnicity (circle all that apply or list)?” Participants were provided with the following choices: White, African-American, Latino, Asian-American/Pacific

Islander, and Other/mixed \_\_\_\_\_. Because 181 youth (15%) in the overall sample identified as “Other/mixed”, a more detailed analysis was conducted using cross-tabulations. Results showed 97 (54%) of these youth self-identified as a mix of Black, Latino, and White. Thus, race/ethnicity was coded in the following way: 1 = *White* (n = 644, 56%), 2 = *Black/African American* (n = 172, 16%), 3 = *Latino/Hispanic* (n = 81, 7%), 4 = *Asian/Asian-American/Pacific Islander/West Indian* (n = 58, 5%), 5 = *Mixed Black, Latino, and/or White* (n = 92, 8%), and 6 = *Other/mixed race/ethnicity* (n = 79, 7%).

Some of the racial/ethnic groups were not large enough to conduct meaningful comparisons. Thus, to maximize the use of the full study sample, two ethnic/racial groups were created: 1 = *White* (n = 668, 56%) and 0 = *non-White* (n = 523, 44%). By doing so, an attempt is made to address the gap in the literature regarding low SES White youths’ program participation by drawing upon the unique socioeconomic and ethnic/racial composition of the study sample. While Fredricks and Eccles (2008) assessed differences in outcomes for European American and African American youth participating in 5 major activity types, their conclusions about the role of SES were limited because of the paucity of low SES European American youth in their sample.

A composite measure of SES was based on youths’ self-report data about participation in free/reduced lunch and the highest level of education achieved by a parent. Youth circled *yes* (1) or *no* (0) in response to the question, “Are you currently participating in the free and/or reduced lunch program?” In this sample, 40% of youth reported that they were currently participating in either free/reduced lunch. Free/reduced lunch has been used as a reliable indicator of family income (Gutman, Sameroff, & Eccles, 2002).

Highest level of parent education was measured with two questions: “What is the highest grade of school completed by your mother?” and “What is the highest

grade of school completed by your father?” Responses were coded as follows: 1 = *high school degree or less*; 2 = *some college*; 3 = *college degree*; or 4 = *advanced degree*. The highest level of education for a participant’s mother or father, whichever was highest, was used as the indicator of highest level of education achieved by a parent. The mean for highest level of mother’s education was 2.27 ( $SD = 1.04$ ). The mean for highest level of father’s education was 2.16 ( $SD = 1.11$ ). To create the composite measure of SES, a score was assigned depending on an individual’s participation in free/reduced lunch and the highest level of education achieved by a parent. Table 5 shows how the groups were formed. In this sample, 61% of youth were considered high SES, while 33% were considered low SES.

Four SES/race groups. The economic and ethnic diversity of the study sample, including high and low SES White and non-White youth, provided an opportunity for making meaningful comparisons between these groups. Thus, a SES/race variable was created in which the cells were large enough to facilitate meaningful comparisons between these groups (Table 5): 1 = *high SES White youth* ( $n = 464$ , 39%), 2 = *high SES non-White youth* ( $n = 271$ , 23%), 3 = *low SES White youth* ( $n = 180$ , 15%), and 4 = *low SES non-White youth* ( $n = 211$ , 18%).

#### *Parental Support*

A 6-item measure of perceived parental support was adopted from the Iowa Youth and Families Inventory (Conger et al., 1986) to assess youths’ perceptions of how often their parent/guardian provides support for them (e.g., “In the past month, how often did your parent/guardian listen carefully to your point of view?”). Responses were provided on a 5-point Likert scale, ranging from 1 (*never*) to 5 (*always*). An additive sum score was used for this measure (6 items,  $\alpha = 0.93$ ) ( $M = 22.44$ ,  $SD = 6.19$ ).

Table 5. *Formation of High SES and Low SES groups based on Free/Reduced Lunch and the Highest Level of Parent Education.*

Participation in Free/Reduced Lunch		Highest Level of Parent Education	High vs. Low SES
1 = <i>Free/reduced lunch</i> 0 = <i>No free/reduced lunch</i>	+	1 = <i>High school degree or less</i>	0 = <i>Low SES</i>
1 = <i>Free/reduced lunch</i> 0 = <i>No free/reduced lunch</i>	+	2 = <i>Some college</i> 2 = <i>Some college</i>	0 = <i>Low SES</i> 1 = <i>High SES</i>
1 = <i>Free/reduced lunch</i> 0 = <i>No free/reduced lunch</i>	+	3 = <i>College degree</i> 3 = <i>College degree</i>	0 = <i>Low SES</i> 1 = <i>High SES</i>
1 = <i>Free/reduced lunch</i> 0 = <i>No free/reduced lunch</i>	+	4 = <i>Beyond college</i>	1 = <i>High SES</i>

#### *Descriptives for Study Variables*

Descriptive statistics for activity participation, outcome, and participant characteristic variables are presented in Table 4. Bivariate correlations are provided in Table 6. Cross-tabulations, chi-squared tests, independent t-tests, and ANOVA tests were used to test within-sample differences. Independent t-tests showed that girls, compared to boys, reported significantly higher autonomous motivation,  $t(1, 763) = 22.21, p < .05$ , physical symptoms,  $t(1, 1119) = -6.01, p < .0001$ , negative affect,  $t(1, 1101) = -5.88, p < .0001$ , trait resilience,  $t(1, 1015) = -2.80, p < .01$ , GPA,  $t(1, 872) = -2.82, p < .01$ , and connectedness to adults in programs,  $t(1, 773) = -2.88, p < .01$ . Parent support was significantly higher for girls, as well, though this difference was marginal,  $t(1, 1053) = .09, p < .10$ . There was only one marginally significant difference by age group, with older youth reporting significantly higher positive affect,  $t(1, 1093) = -1.83, p < .10$ . Perceived parental support was positively correlated with autonomous motivation, life satisfaction, positive affect, trait resilience, GPA,

Table 6. *Bivariate Correlations for All Study Variables.*

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Autonomous motivation	-											
2. Life satisfaction	.30**	-										
3. Physical symptoms	-.01	-.22**	-									
4. Positive affect	.26**	.25**	.03	-								
5. Negative affect	-.04	-.25**	.30**	.15**	-							
6. Psychological resilience	.45**	.41**	-.08*	.35**	-.11**	-						
7. GPA	.13**	.26**	-.10**	.15**	-.08*	.23**	-					
8. Participation duration	.20**	.19**	-.06	.06	-.05	.14**	.16**	-				
9. Connectedness to adults	.42**	.24**	-.02	.23**	-.03	.37**	.14**	.11**	-			
10. Gender	.08*	-.05	.18**	.05	.18**	.09**	.10**	.05	.10**	-		
11. Age group	-.01	.00	.04	.06	-.01	.04	-.01	.05	.03	-.02	-	
12. Parental support	.32**	.46**	-.06	.27**	-.12**	.40**	.18**	.12**	.23**	.05	-.03	-

\*  $p < .05$  \*\*  $p < .01$

Note: Gender (1 = *female*, 0 = *male*); age group (1 = *16-19 year olds*, 0 = *13-15 year olds*).

connectedness to adults in activities (all significant at  $p < .0001$ ), and participation duration ( $p < .01$ ), but was negatively correlated with physical symptoms ( $p < .10$ ) and negative affect ( $p < .0001$ ).

A series of ANOVA F tests revealed significant differences between the 4 SES/race groups, after applying the Bonferonni correction for multiple comparisons. Results favored higher SES youth, particularly higher SES White youth, on the following variables: psychological resilience,  $F(3, 976) = 6.51, p < .0001, \eta^2 = .020$ , GPA,  $F(3, 850) = 47.48, p < .0001, \eta^2 = .144$ , autonomous motivation,  $F(3, 740) = 2.42, p < .10, \eta^2 = .065$ , life satisfaction,  $F(3, 1025) = 12.21, p < .0001, \eta^2 = .035$ , and parental support,  $F(3, 1011) = 7.70, p < .0001, \eta^2 = .022$ . An analysis of between-group differences showed high SES White youth reported higher ego-resilience than both low SES White ( $p < .0001$ ) and low SES non-White ( $p < .05$ ) youth. High SES non-White youth reported higher ego-resilience than low SES White ( $p < .01$ ) and low SES non-White ( $p < .01$ ) youth. High SES White youth also had a higher GPA compared to all other groups (all significant at  $p < .0001$ ), while high SES non-White youth had a higher GPA than low SES White ( $p < .0001$ ) and low SES non-White ( $p < .0001$ ) youth. Though marginally significant, high SES White youth reported higher autonomous motivation than low SES White youth ( $p < .05$ ) and low SES non-White youth ( $p < .10$ ), while high SES non-White youth reported higher autonomous motivation than low SES White youth ( $p < .05$ ).

Post hoc analyses also revealed high SES White youth reported higher life satisfaction compared to all other groups, including high SES non-White ( $p < .001$ ), low SES White ( $p < .0001$ ), and non-White youth ( $p < .0001$ ). Results also showed high SES White youth reported higher perceived parental support, compared to all other groups (all significant at  $p < .0001$ ). There were also significant differences in physical symptoms,  $F(3, 1072) = 5.12, p < .01, \eta^2 = .014$ , and positive affect,  $F(3,$

1060) = 4.29,  $p < .01$ ,  $\eta^2 = .012$ , among the four SES/race groups. Low SES White youth reported more physical symptoms than both high SES non-White youth ( $p < .001$ ) and low SES non-White youth ( $p < .01$ ), while high SES White youth reported more physical symptoms than low SES non-White youth ( $p < .10$ ). Low SES White youth reported the lowest positive affect, compared to all other groups including high SES White youth ( $p < .01$ ), high SES non-White youth ( $p < .001$ ), and low SES non-White youth ( $p < .05$ ). There were no significant differences among the 4 SES/race groups in negative affect, gender, or age group.

#### *Overall Plan of Analysis*

While the overall plan of analysis for this investigation is now provided, a more detailed explanation of the analytical tools that are used to answer each specific research question is provided in subsequent chapters. Frequency data, cross-tabulations, and chi-squared statistics are used to provide a general description of what activity participation looks like in this sample of adolescents. To assess potential differences between continuous variables, categorical variables with two groups, as well as categorical variables with more than two groups, independent t-tests, as well as the General Linear Model (GLM) ANOVA and MANOVA tests are used. Post-hoc analyses are used to examine, in greater detail, differences between groups, while applying the Bonferonni correction for multiple comparisons to protect against a Type I error.

When characteristics of activity participation and reflective practices are assessed, individual and family characteristics are entered into models as covariates and as interaction terms to assess their potential moderating effects on relations between key participation and outcome variables, rather than entering them solely as covariates (Evans, 2004; Fredricks & Eccles, 2008). Interaction terms were only



included in a model if evidence from previous studies or descriptive statistics from this study showed significant relations between the factors.

This investigation delves deeper into assessing participant characteristics as main variables of interest with use of multinomial logistic regression (MLR) and cluster analysis to illuminate those participant characteristics that are significantly associated with greater odds of participating in certain types of activities or in particular patterns of reflective practices, compared to others. MLR will be used to identify those participant characteristics that are significantly associated with greater odds of engagement in a particular pattern of reflection about program experiences, compared to other patterns of reflection. MLR analysis has been used in other studies that sought to identify individual characteristics that predicted membership into particular groups compared to other groups, and is an appropriate analytical approach for studies with a large sample size. MLR has been used in studies related to organized activity participation (Linver, Roth, & Brooks-Gunn, 2009), to experimental disclosure (Parks et al., 2012), and to low-income and physical well-being (Brody et al., 2012).

## CHAPTER 3

### Program Participation in this Sample of Adolescents

The overall objective of Chapter 3 is to provide a picture of school activity and program participation in this sample of adolescents by assessing differences in three key features of activity participation by participant characteristics.

#### *Chapter 3 Research Questions and Hypotheses*

*Research Question 1:* Do activity participants differ from those not participating in any activity in terms of:

- a) Participant characteristics (i.e., gender, age group, SES/race, parental support)
- b) Indicators of well-being (i.e., life satisfaction, positive affect, negative affect, physical symptoms, GPA, psychological resilience)

*Hypothesis 1b:* Activity participants will be associated with more favorable outcomes compared to those not participating in any activity. Specifically, a greater proportion of high SES youth (both White and non-White) and youth with higher parental support are expected among activity participants vs. non-participants. Activity participants are expected to report significantly higher well-being (i.e., life satisfaction, GPAs, and psychological resilience, and lower negative affect and physical symptoms) compared to those not participating in any activity.

*Research Question 2:* How does the nature of activity participation differ for youth with different participant characteristics regarding the following features of activity participation?

- a) Activity type (i.e., sport, performing and fine arts, academic clubs, faith-based/community/service programs)
- b) Connectedness to adults in one's activity

*Hypothesis 2b:* Youth with higher parental support will report significantly higher connectedness to adults in one's activity than youth with lower parental support.

c) Participation duration

*Introduction to Chapter 3*

While youths' participation in school and community programs has been assessed in samples of middle-income, suburban White youth (e.g., Larson et al., 2006), and in samples of lower-income, ethnically diverse urban youth (e.g., Pederson & Seidman, 2005), there is a paucity of studies that assess program participation in samples that include both high- and low-SES White and non-White youth, especially studies that assess key features of activity contexts and participation (i.e., activity type, connectedness to adults, participation duration) in relation to autonomous motivation and internalization processes. Thus, this sample that includes both high- and low-SES White and non-White youth is particularly well-suited for answering questions about economic and ethnic/racial differences in youths' selection into various school activities and community programs, and for illuminating potential factors that may inhibit youths' access to those programs (e.g., financial, proximity to programs, social status). Furthermore, to more closely assess the contribution of individual and family characteristics of the participants, this chapter examines these factors as main variables of interest, rather than simply controlling for them (Evans, 2004). Furthermore, this study addresses the need for assessing other factors related to SES besides income (Simpkins et al., 2013) by assessing the potential moderating effect of parental support on these relations.

While many studies have compared youths' participation rates, processes, and outcomes in one or two types of activities (e.g., Linver et al., 2012), few studies have compared outcomes related to participation in several types of activities using an

ethnically and economically diverse sample of youth. Larson et al. (2006) found youth report significantly different developmental experiences in 6 types of activities. However, their sample consisted of mainly middle-income European American youth, which the authors thought may have contributed to their not having found a significant interaction effect for Activity Type X SES on differences in developmental experiences. On the other hand, while Fredricks and Eccles (2008) assessed differences in youth outcomes associated with participation in different types of activities by participant characteristics, including those related to income and race/ethnicity, they only examined youths' participation in 3 activity contexts: school clubs, high school sports teams, and out-of-school recreational activities. Thus, this chapter addresses the need for understanding how participation rates, processes, and outcomes may differ across 4 types of activities, and to illuminate potential differences in these relations in a sample that includes both high- and low-SES White and non-White youth.

Findings from previous studies also highlight relationships with supportive and caring adults within programs as another key ecological asset that benefits youths' program experiences, processes, and associated outcomes (e.g., Larson, 2006; Whitlock, 2007). Thus, differences in youths' reports of connectedness to adults in programs are also assessed in this chapter. Particular attention is paid to illuminating potential differences in reported level of connectedness to adults in programs by characteristics of the participants and their family. These results may provide insight into the individual and family characteristics that may predispose youth to join programs where opportunities for feeling connected to adults are fostered.

Results may also provide insight into those personal characteristics that support youth in creating and fostering connections with adults that may not only serve them as individuals, but may also benefit other peers and adults in the program.

Based on the finding that feeling connected to at least one parent fosters feelings of community connectedness (Whitlock, 2007), it may be the case that youth who are in the greatest need of feeling connected to adults in programs due to a lack of perceived parental support at home, may not be selecting into programs high in connectedness to adults, or may select into programs high in connectedness to adults, but are less likely to engage in interactions that foster those youth-adult relations. Thus, a preliminary assessment of these factors will provide the foundation for further examination of relations between connectedness to adults, autonomous motivation, and well-being.

Larson (2009) suggested longer participation duration might be more important for lower-income youth to help bring them up to where middle-income youth may be. For example, building meaningful relationships take time, and middle-income youth may have greater resources to sustain their participation, therefore heightening their exposure to supports and opportunities that foster development, what Larson (2009) calls redundant resources. Thus, participation duration is also assessed in this chapter as a key characteristic of program participation that may influence how autonomously motivated youth are about their program participation.

In summary, the aims of this chapter include: a) describing the study sample regarding overall participation rates in school and community activities, b) testing for significant differences in the types of activities youth participate in depending upon characteristics of the participants (i.e., gender, age group, SES/race, parental support), c) assessing potential significant differences in reported level of connectedness to adults in one's activity by characteristics of the participants, and d) testing for significant differences in participation duration by characteristics of participants.

## *Method*

### Participants

To assess differences between those students currently participating in an activity, compared to those students who were not participating in an activity, the full study sample was used ( $N = 1198$ ). Of these 1198 youth participants, 868 (72%) reported on their current participation in a school activity or community program.

### Measures

#### *Activity Participation Variables*

Current activity participation. A binary variable was created based on whether or not a student was currently participating in an activity or program at the time of data collection (1 = *currently participating in an activity*, 0 = *not currently participating in an activity*).

Activity type. The activity that youth indicated they were currently most engaged in or spent the most time participating in when data was collected was considered their “Target Activity”. Youths’ Target Activity was coded by activity type (1 = *sports*, 2 = *performance and fine arts*, 3 = *academic clubs*, and 4 = *community/faith-based programs*).

Connectedness to adults in target activity. Youths’ reported level of connectedness to adults in their Target Activity was measured using Whitlock’s (2007) 7-item measure of school connectedness that was adapted to measure youths’ connectedness to adults in their Target Activity. Responses to the 7 items ( $\alpha = 0.89$ ) were measured using a 5-point Likert scale, and were summed ( $M = 29.40$ ,  $SD = 5.63$ ).

Participation duration. The duration of youths’ participation in their Target Activity was calculated based on youths’ responses to the question, “How much experience do you have in this activity (e.g., 1 year, 3 months)?” ( $M = 1.90$ ,  $SD = .86$ ).

### *Outcome Variables*

Potential differences between activity participants vs. non-participants on indicators of well-being were assessed. Thus, all outcome variables described in Chapter 2's method section were assessed in this chapter: life satisfaction, positive affect, negative affect, ego-resilience, and GPA.

### *Participant Variables*

Categorical participant variables included gender (0 = *male*, 1 = *female*), age group (0 = *13-15 years old*, 1 = *16-19 years old*), and SES/race (1 = *high SES White*, 2 = *high SES non-White*, 3 = *low SES White*, and 4 = *low SES non-White*). One continuous variable is also assessed, parental support (6 items,  $\alpha = 0.93$ ) ( $M = 22.44$ ,  $SD = 6.19$ ). A dichotomous variable was created for perceived parental support (0 = *below mean parental support*, 1 = *above mean parental support*) when using cross-tabulations to assess participation rates in types of activities by participant characteristic.

### *Plan of Analysis*

Cross-tabulations and chi-squared tests were run to assess differences between the individual and family characteristics of those who were currently participating in an activity compared to those who were not currently participating in an activity. Chi-squared tests using the Bonferroni Correction for multiple comparisons were run to examine differences in participation rates between the 4 SES/race groups. Independent t-tests were run to assess differences between activity participants vs. non-participants on the one continuous participant variable (i.e., parental support), and on the continuous outcome variables (i.e., life satisfaction, positive affect, negative affect, ego-resilience, GPA).

Differences in the rate of participation in various types of activities by participant characteristic were assessed using descriptive statistics, including count

data and percentages. Multinomial logistic regression (MLR) was then used to examine the individual and family characteristics significantly associated with greater odds of participation in a particular activity type, compared to other activity types. Three separate MLR models were run, each using a different activity type as the reference group, until all between-group comparisons were made. All participant characteristics were entered simultaneously into the models. Because the SES/race variable is comprised of 4 groups (e.g., high SES White), models were re-run using a different SES/race group as the reference group until all between-group comparisons were made. The Bonferroni correction was applied to protect against a Type I error.

The General Linear Model (GLM) was used to assess relations between the 2 continuous activity participation variables (i.e., participation duration and connectedness to adults in one's activity) and categorical, as well as continuous participant variables. The advantages of using GLM over other models is that it more easily allows for the testing of both categorical and continuous independent variables by automatically dummy-coding categorical variables. It also easily allows for the inclusion of interaction terms in the model, and can generate beta coefficients to assess the contribution of individual variables to the model. However, caution should be used, however, in over interpreting due to the nature of the cross-sectional data. Post-hoc analyses were run to assess differences between the 4 SES/race groups. Separate models were run in which each SES/race group served as the reference group. The Bonferroni correction for multiple comparisons was applied.

### *Results*

#### Activity Participants vs. Non-Participants

Of the 1198 total youth in this sample, 868 youth (72%) were currently participating in a school activity or community program, while 330 youth (28%) reported they were not participating in any activity at the time of data collection



(Table 7). As expected, there was a significant difference between participants vs. non-participants by SES/race,  $\chi^2(1, 1125) = 23.19, p < .0001$ , with a greater proportion of activity participants among high SES White youth, compared to all other SES/race groups, including high SES non-White youth ( $p < .05$ ), low SES White youth ( $p < .001$ ), and low SES non-White youth ( $p < .001$ ). There were no significant differences in participation rates between the other SES/race groups. Also in-line with expectations, independent t-tests showed activity participants reported more favorable outcomes compared to non-participants including higher parental support,  $t(1, 1062) = -4.56, p < .0001$ , satisfaction with life,  $t(1, 1075) = -3.99, p < .0001$ , positive affect,  $t(1, 1114) = -6.22, p < .0001$ , ego-resilience,  $t(1, 1024) = -5.51, p < .0001$ , and GPA,  $t(1, 879) = -5.67, p < .0001$ . There were no differences between participants vs. non-participants with regards to gender, age group, physical symptoms, or negative affect.

Table 7. *Frequencies, Percentages, and Chi-Squared Statistics Comparing Participants vs. Non-Participants by Categorical Participant Variables.*

Participant Variable	Significant Comparisons	Non-Participants	Participants	Total	$\chi^2$
Gender					1.17
Male		161 (29%)	399 (71%)	560	
Female		163 (26%)	465 (74%)	628	
Age Groups					0.65
13-15 year olds		159 (29%)	397 (71%)	556	
16-19 year olds		164 (27%)	455 (74%)	619	
SES/Race					23.19****
High SES White		86 (19%)	378 (82%)	464	
High SES Non-White*					
Low SES White***					
Low SES Non-White***					
High SES Non-White		75 (28%)	196 (72%)	271	
Low SES White		59 (33%)	121 (67%)	180	
Low SES Non-White		69 (33%)	142 (67%)	211	
TOTAL		330 (28%)	868 (72%)	1198	

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$  \*\*\*\*  $p < .0001$

Note: Discrepancies in frequencies presented in this table are due to missing data.

## Features of Activity Participation by Participant Characteristics

### *Activity Type*

The frequency and percentage of study participants involved in each activity type were as follows (Figure 3): sports ( $n = 435$ , 50%), performing and fine arts ( $n = 158$ , 18%), community/faith-based programs ( $n = 109$ , 13%), and academic clubs ( $n = 113$ , 13%). The participation rate for involvement in paid and unpaid work ( $n = 53$ , 6%) was also included in Figure 3 to more accurately reflect youths' participation in all of the activity types represented in this sample. However, due to the relatively small cell size of youth involved in paid/unpaid work, data on youths' participation in paid/unpaid work was not included in subsequent analyses. Thus, after excluding data on youth involved in work experiences, there were 815 activity participants in the study sample.

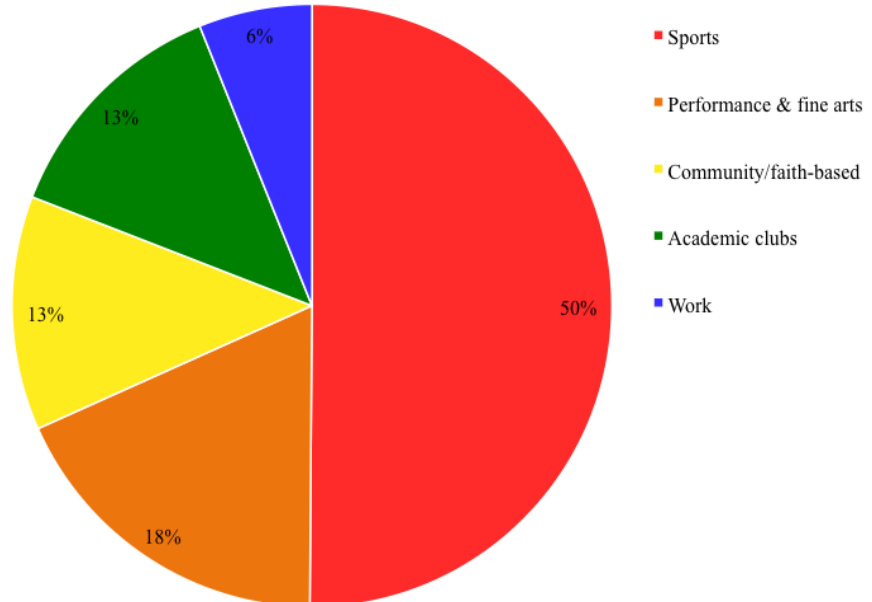


Figure 3. *Proportion of Study Participants in Five Activity Types.*

Chi-squared tests revealed significant differences in youths' participation in different activity types by gender and by SES/race, but not by age group (Table 8). GLM results showed there was a significant difference in the level of perceived parental support reported by youth participating in the 4 activity types,  $F(3, 738) = 3.71, p < .01, \eta^2 = .015$ . Post-hoc analyses showed that the only between-group difference, after applying the Bonferroni Correction for multiple comparisons, was performing and fine arts participants reporting significantly higher perceived parental support than those in academic clubs ( $p < .05$ ).

Results of the multinomial logistic regression (MLR) analyses revealed those participant characteristics that are significantly associated with greater odds of participation in certain activity types, compared to others (Tables 9-11). When assessing differences between the 4 SES/race groups, the only significant differences were between the high SES White group and the 3 other SES/race groups. Thus, Tables 9-11 only present results in which the high SES White group was used as the reference group. When interpreting the findings presented in the tables, a positive coefficient indicates a greater likelihood of inclusion in the comparison profile, whereas a negative coefficient indicates a greater likelihood of inclusion in the reference group.

The likelihood ratio chi-squared test for the first MLR model (Table 9) in which sports was entered as the reference group, was significant,  $\chi^2(18, N = 700) = 130.45, p < .0001$ . Results showed being male was associated with significantly greater odds of participation in sports, compared to participation in performing and fine arts activities ( $p < .0001$ ) and community/faith-based programs ( $p < .05$ ). Being high SES and White, compared to all other SES/race groups, was associated with greater odds of participation in sports than participation in community/faith-based programs ( $p < .0001$ ). Being high SES and White, compared to being low SES and

Table 8. *Frequencies, Percentages, and Chi-Squared Statistics Comparing Youth in 4 Activity Types by Participant Variables.*

<i>Variable Type</i>		Frequencies <i>N (%)</i>				Total	Descriptive statistics
Participant variable	Group	Sports	Performing & fine arts	Community /faith-based	Academic clubs		$\chi^2$
<i>Categorical variable</i>							
Gender							57.02****
	Male	252 (66%)	38 (10%)	43 (11%)	51 (13%)	384	
	Female	181 (43%)	120 (28%)	63 (15%)	62 (15%)	426	
Age Group							6.32
	13-15	225 (57%)	63 (16%)	49 (13%)	55 (14%)	392	
	16-19	204 (50%)	91 (22%)	56 (14%)	56 (14%)	447	
SES/Race							62.12****
	High SES White	232 (65%)	70 (20%)	20 (6%)	33 (9%)	355	
	High SES Non-White	95 (51%)	36 (19%)	31 (17%)	26 (14%)	188	
	Low SES White	52 (46%)	21 (19%)	17 (15%)	22 (20%)	112	
	Low SES Non-White	46 (35%)	26 (20%)	31 (24%)	27 (21%)	130	
		435 (50%)	158 (18%)	109 (13%)	113 (13%)	815	
<i>Continuous variable</i>							
		Mean scores (standard error)					ANOVA F
	Parental support	23.03(.31)	24.23(.51)	22.21(.62)	21.83 (.60)		3.71**

\*  $p < .05$     \*\*  $p < .01$     \*\*\*  $p < .001$     \*\*\*\*  $p < .0001$

Note: Numbers and proportions reflect the total number of participants, not including those who reported on paid or unpaid work.

Table 9. *Comparison of Log Odds Coefficients and Odds Ratios for Activity Type with Participant Characteristics with Sports as the Reference Group.*

Cluster	Participant variable	Logit	SE	Odds ratio
Performance and fine arts				
	Female	-1.65****	0.24	0.19
	16-19 years old	-0.38	0.21	0.68
	Parental support	0.04	0.02	1.04
	High SES Non-White	0.46	0.27	1.59
	Low SES White	0.37	0.33	1.45
	Low SES Non-White	0.78	0.33	2.17
Community/faith-based				
	Female	-0.74*	0.26	0.48
	16-19 years old	-0.09	0.25	0.91
	Parental support	-0.01	0.02	0.99
	High SES Non-White	1.24****	0.34	3.45
	Low SES White	1.46****	0.38	4.28
	Low SES Non-White	2.06****	0.37	7.83
Academic clubs				
	Female	-0.49	0.23	0.62
	16-19 years old	-0.10	0.23	0.91
	Parental support	-0.02	0.02	0.98
	High SES Non-White	0.75	0.31	2.12
	Low SES White	1.10**	0.34	3.00
	Low SES Non-White	1.54****	0.33	4.66

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$  \*\*\*\* $p < .0001$

White ( $p < .01$ ) and being low SES and non-White ( $p < .0001$ ), was associated with greater odds of participation in sports than in academic clubs.

The second MLR model in which performing and fine arts served as the reference group (Table 10) showed being female was associated with greater odds of participation in performing and fine arts activities than in community/faith-based programs ( $p < .05$ ) and academic clubs ( $p < .0001$ ). Being high SES and White, compared to being low SES and non-White, was associated with greater odds of participation in performing and fine arts programs compared to participation in community/faith-based programs ( $p < .01$ ). Higher perceived parental support was also associated with greater odds of participation in performing and fine arts activities than in academic clubs ( $p < .05$ ). The final MLR model showed no significant

differences in the odds of participation in community/faith-based programs vs. academic clubs by individual and family characteristics (Table 11).

Table 10. *Comparison of Log Odds Coefficients & Odds Ratios for Activity Type with Participant Characteristics with Performance & Fine Arts as the Reference Group.*

Cluster	Participant variable	Logit	SE	Odds ratio
Community/faith-based				
	Female	0.90*	0.32	2.47
	16-19 years old	0.29	0.29	1.34
	Parental support	-0.06	0.02	0.95
	High SES Non-White	0.78	0.39	2.18
	Low SES White	1.09	0.44	2.96
	Low SES Non-White	1.28**	0.41	3.60
Academic clubs				
	Female	- 1.16****	0.30	3.19
	16-19 years old	0.29	0.27	1.33
	Parental support	-0.06*	0.02	0.94
	High SES Non-White	0.29	0.36	1.34
	Low SES White	0.73	0.40	2.08
	Low SES Non-White	0.76	0.38	2.14

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$  \*\*\*\* $p < .0001$

Table 11. *Comparison of Log Odds Coefficients & Odds Ratios for Activity Type with Participant Characteristics with Community/Faith-Based Programs as Reference Group.*

Cluster	Participant variable	Logit	SE	Odds ratio
Academic clubs				
	Female	0.26	0.31	1.29
	16-19 years old	-0.00	0.30	1.00
	Parental support	-0.01	0.02	1.00
	High SES Non-White	-0.49	0.42	0.61
	Low SES White	-0.36	0.45	0.70
	Low SES Non-White	0.76	0.38	2.14

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$  \*\*\*\* $p < .0001$

### *Connectedness to Adults in One's Activity*

The relationship between participant characteristics and youths' reports of connectedness to adults in their activity was also assessed. The overall model, which included all participant variables as covariates, was significant,  $F(6, 671) = 7.10$ ,  $p <$

.0001,  $\eta^2 = .060$ . As expected, perceived parental support was positively associated with connectedness to adults,  $\beta = .20$ ,  $t(671) = 5.63$ ,  $p < .0001$ , and girls reported significantly higher connectedness to adults in their activity, compared to boys,  $\beta = -1.05$ ,  $t(671) = -2.45$ ,  $p < .05$ .

#### *Participation Duration*

The overall model assessing relations between participant characteristics and participation duration was also significant,  $F(6, 611) = 7.99$ ,  $p < .0001$ ,  $\eta^2 = .074$ . With all participant variables entered in the model as covariates, perceived parental support was found to be positively associated with participation duration,  $\beta = .014$ ,  $t(611) = 2.47$ ,  $p < .01$ . Furthermore, being older (16-19 years old vs. 13-15 years old) was marginally associated with higher participation duration,  $\beta = -.12$ ,  $t(611) = -1.84$ ,  $p < .10$ . Furthermore, high SES White youth reported significantly higher participation duration compared to all other SES/race groups, including high SES non-White youth ( $p < .01$ ), low SES White youth ( $p < .001$ ), and low SES non-White youth ( $p < .0001$ ). Also, high SES non-White youth reported significantly higher participation duration than low SES non-White youth ( $p < .01$ ).

#### *Discussion*

The purpose of this chapter was to paint an overall picture of participation in school activities and community programs in this sample of adolescents. Drawing upon the diversity of the sample, differences in overall participation rates, participation in 4 types of activities, the level of connectedness to adults youth report in their activities, and the duration of their participation were illuminated.

#### *Differences Between Participants vs. Non-Participants*

The first set of results showed 72% of youth in this sample were currently participating in an activity or program at the time of data collection. This is similar to the 70% participation rate documented in other studies (e.g., Larson et al., 2006).

Findings revealed several differences in the individual and family characteristics of participants vs. non-participants. High SES White youth were significantly more likely to be participating in a school activity or program, compared to every other SES/race group. This is consistent with other findings showing lower participation rates among lower-income youth (Pederson & Seidman, 2005). High SES non-White youth reported the second highest program participation rate in this sample, followed by low SES non-White youth, with low SES White youth reporting the lowest overall participation rate.

These results provide additional evidence that disparities in participation rates are strongly related to income. Studies have highlighted lower participation rates among low income non-White urban youth (e.g., Pederson & Seidman, 2005), and a few studies have reported on the low participation rate among low SES White youth (e.g., Conger et al., 2012). Findings from this study demonstrate that compared to high- and low-SES non-White youth and high SES White youth who attend the same high school, low SES White youth are the most vulnerable youth in terms of participation in school and community programs. Thus, more attention should be paid to studying and promoting program participation among low SES White youth, and to ensuring that the programs they are able to access and participate in are high quality programs.

Promoting participation among lower-resourced under-served youth is particularly important considering Mahoney et al. (2006) found youth who participate in an activity at moderate, as well as high levels (20 hours or less), show better outcomes (e.g., academic achievement, psychological adjustment, lowered rates of smoking and drug use) than those not participating in any activity. Since high perceived parental support was positively associated with participation, parents' awareness of youth programs and the potential benefits of program participation in



promoting development should be highlighted. Parents can also be encouraged to take part in their child's activity, which may not only increase youths' participation rates, but increase parent-youth connectedness, as well as youths' connectedness with non-parental adults at school.

#### Differences in the Types of Activities Participated in by Diverse Youth

The majority of activity participants in this sample (50%) were involved in sports, while the remaining activity participants were spread more equally across the other types of activities (i.e., performance and fine arts, community/faith-based activities, academic clubs). Results from the MLR analyses highlighted those individual and family characteristics that are associated with significantly greater odds of participation in a particular activity type, compared to other activity types.

MLR results showed boys had significantly greater odds of participating in sports than in performing and fine arts activities. Gender differences in sports participation rates, with more boys participating in sports compared to girls, have been documented elsewhere (Tucker Center, 2007). MLR results also showed high SES White youth had significantly greater odds of participating in sports than in community/faith-based programs and academic clubs. Previous studies have found sports participants tend to be White and higher income (e.g., Pederson & Seidman, 2005). On the other hand, MLR results also showed that girls and high SES White youth (vs. low SES non-White youth) had significantly greater odds of participating in performing and fine arts programs than in community/faith-based programs. Furthermore, those with higher perceived parental support had greater odds of participating in performing and fine arts programs than in academic clubs.

These results highlight the important role of gender and income in youths' selection into activities and programs known to provide significantly different supports and opportunities for youth (Larson et al., 2006). For example, sports have

been associated with high social status in American high schools (Eccles & Barber, 1999), and performing and fine arts programs are more likely to be participated in by girls with a more stereotypical feminine gender orientation (Eccles & Barber, 1999). Thus, boys' selection into sports, girls' selection into performing and fine arts, and high SES White youths' selection into sports and performing and fine arts (vs. academic clubs and community/faith-based programs) may reinforce traditional gender roles and expectations, as well as the power structure and status associated with certain identities (e.g., jock vs. rebel) within American high schools (Eccles & Barber, 1999). Furthermore, results highlight the need for developing easily accessible, low-cost sports programs for low-income youth, especially low-income girls. Not only have studies demonstrated sharp declines in sports participation rates among girls as they move through adolescence (Kimm et al., 2002), and a higher risk of overweight and obesity among lower income youth (Hedley et al., 2004), but the limited resources that are available in lower resourced communities are often allocated for boys' but not for girls' sports programs (Way & Leadbeater, 2008).

#### Connectedness to Adults and Participation Duration by Participant Characteristics

Several key participant and family characteristics were significantly related to two other aspects of participation – connectedness to adults in one's activity and participation duration. Girls reported significantly higher connectedness to adults, compared to boys. This is congruent with findings showing girls reported higher connectedness than boys in several contexts (e.g., peers, school) (Karcher et al., 2007). Older youth reported significantly greater participation duration compared to younger youth, a finding that was not surprising. Parental support was positively associated with connectedness to adults in programs, a finding that was highly significant. This is in line with results showing that a high level of connectedness with at least one parent predicts higher community and school connectedness (Whitlock, 2007).

Findings from this chapter also showed that parental support was positively associated with longer participation duration, which highlights the importance of support from parents in encouraging youth to both join and sustain their involvement in organized activities (Simpkins et al., 2011).

There were no significant differences in connectedness to adults amongst the 4 SES/race groups. This was surprising considering Karcher and Sass (2010) found ethnic differences in youths' reports of connectedness to adults, with White youth reporting higher connectedness to neighborhood and friends but lower connectedness to siblings (vs. African American and Latino/a youth). SES/race, however, was significantly associated with participation duration. High SES White youth reported significantly higher participation duration, compared to all other SES/race groups. In addition, high SES non-White youth reported significantly longer duration than low SES non-White youth. Both results highlight the importance of SES-related factors in sustaining youths' participation in programs. Furthermore, results may indicate that youth who already have supports at home are also benefitting from sustained exposure to ecological assets afforded in programs (i.e., redundant resources; Larson, 2009), while those who lack parental support at home are not able to sustain their exposure to positive assets if such assets are available within the learning context.

This chapter described school activity and program participation in this sample of adolescents. Differences in the types of organized activities youth select into, as well as their feelings of connectedness to adults and participation duration were shown to differ significantly by characteristics of the participants. Some of the potential factors influencing youths' selection into and ability to gain access to activities that differ in supports and opportunities known to influence youth outcomes were elucidated. Our attention is now turned to understanding the relationship between

these features of activity participation and one key mechanism of development – autonomous motivation.

## CHAPTER 4

### Associations between Key Features of Activity Participation and Adolescents'

#### Autonomous Motivation

Chapter 4 assesses relationships between the same key features of activity participation (i.e., activity type, connectedness to adults in programs, participation duration) and one potential mechanism of development, autonomous motivation. This chapter also identifies investigates relations between participant characteristics and three features of activity participation.

#### *Chapter 4 Research Questions and Hypotheses*

*Research Question 3:* Do youth participating in different types of activities report significantly different levels of autonomous motivation?

*Research Question 4:* How does connectedness to adults in one's program relate to autonomous motivation?

*Hypothesis 4:* Youth reporting higher connectedness to adults in their program will report significantly higher autonomous motivation than youth with lower connectedness to adults in their program.

*Research Question 5:* How does participation duration relate to autonomous motivation?

*Hypothesis 5:* Youth reporting participation duration will report significantly higher autonomous motivation than youth with lower participation duration.

*Research Question 6:* Do youth with varying levels of connectedness to adults in their program (high vs. low) and participation duration (high vs. low) report significantly different levels of autonomous motivation?

*Hypothesis 6:* Youth with high connectedness and high participation duration will report significantly higher autonomous motivation

compared to other participant groups (i.e., high connectedness but low duration, low connectedness but high duration, low connectedness and low duration).

#### *Introduction to Chapter 4*

This chapter assesses relations between the key features of activity participation identified in the last chapter (i.e., activity type, connectedness to adults in one's activity, participation duration) and autonomous motivation in programs. Although activity participation has been associated with both positive and negative youth outcomes (e.g., Gardner et al., 2012; Vest & Simpkins, 2013), there is a need to identify underlying mechanisms of development that explain these relations. One potential mechanism through which activity participation may benefit youth outcomes is through the process of “transferring the regulation of behavior from outside to inside the individual. When individuals are self-determined, their reasons for engaging in behavior are fully internalized... for when “individuals are self-determined, their reasons for engaging in behavior are fully internalized” (Eccles & Wigfield, 2002, p. 113). Being more autonomously motivated in one's behaviors contributes to greater internalization, where self and motivation become aligned to promote self-determined human functioning (Deci & Ryan, 2002).

Greater autonomous motivation has been positively associated with well-being among adolescents (e.g., Soenens et al., 2007). The capacity for self-integration and internalization is positively associated with the Positive Youth Development's (PYD) 5 C's (i.e., Competence, Confidence, Connection, Character, and Caring) (e.g., Gestsdottir et al., 2009), and Gestsdottir et al. (2011) showed organized activity participation promotes youth participants' capacity for internalization. Despite advancements in what is known about the benefits of more autonomous and intrinsically motivated internalization, questions remain regarding which specific

features of activity contexts and of activity participation support autonomous motivation and which factors may explain interindividual differences in these relations (Gestsdottir et al., 2011).

Results from Chapter 3 shed light on which features of activity participation and of participants may be particularly important when it comes to autonomous motivation. For example, boys and higher SES White youth were found to have greater odds of participating in sports compared to community programs. By selecting into that activity (that social group), youth assimilate into that group's norms and internalize an identity associated with membership in that group (Berger, & Luckmann, 1966; Larson, 2000). Thus, youth with certain characteristics may join certain types of activities that, in turn, may re-emphasize or re-instill the values, perspectives, and/or identity associated with that person's individual and/or family characteristics.

In addition, evidence shows that different types of activities are known to provide various supports and opportunities (Larson et al., 2006) which may not only influence which learning experiences youth are exposed to, but may also influence the extent to which the regulation of behavior originating from outside the self is integrated into the self-system. For example, findings based on a study with White middle-income youth showed participation in faith-based youth groups is associated with significantly more opportunities for identity exploration compared to participation in academic clubs (Larson et al., 2006), and thus may promote significantly greater integration of those identity experiences. In other words, we may ask the question, are certain activity types more supportive of autonomous motivation compared to other types of activities?

Fredricks and Eccles (2008) assessed differences in youth outcomes depending upon participation in various activity types in a sample of African American and

European American low SES and high SES youth. However, relations between activity type and autonomous motivation were not assessed, and there were not enough low SES European American youth in the sample to make meaningful comparisons between those youth and other SES/race groups. Thus, this chapter examines significant differences in autonomous motivation among high- vs. low-SES White and non-White youth participating in 4 types of activities (i.e., sports, performing and fine arts, academic clubs, community/faith-based programs). Furthermore, key individual and family characteristics are assessed as main variables of interest by entering them into models as interaction terms (Fredricks & Eccles, 2008).

The development of a coherent and well-integrated self is strongly influenced by contextual features that support or hinder development (Harter, 2006). Positive adult leaders are often discussed as playing a fundamental role in determining the quality of youths' activity experiences, including helping youth make meaning of their activity experiences (Larson, 2009). However, few studies within the body of research on organized activities have studied the relationship between youths' feelings of connectedness to adults within programs and youths' self-regulative processes. In Chapter 3, we established that girls and youth with higher parental support also report significantly higher connectedness to adults in programs. Thus, in this chapter, we will examine the potential moderating effects of these participant and family characteristics in the relationship between youths' feelings of connectedness to adults in programs and autonomous motivation.

The third and final feature of program participation considered in this chapter as it relates to youths' reports of autonomous motivation is participation duration. Larson (2009) suggested participation duration may be more important for youth from lower-resourced communities in providing longer exposure to supports and



opportunities that may help bring those youth up to the level of higher-income youth. However, in Chapter 3 we found that high SES youth, particularly high SES White youth, in addition to youth with higher perceived parental support and older youth, reported significantly longer participation duration. Findings from several other studies have shown that the effects of participation duration may vary depending upon characteristics of the participant (e.g., stronger effects of longer duration on youth outcomes among youth with lower interpersonal competence; Mahoney et al., 2003). Thus, this chapter examines relations between participation duration and autonomous motivation, and tests for the potential moderating effects of participant characteristics.

Though youth may benefit from longer program participation, the benefits may be even greater if participation is sustained in programs that youth perceive as having key resources and supports, such as greater connectedness to adults. Thus, in this chapter, significant differences in reported level of autonomous motivation will be examined between the following 4 groups: 1) youth who report high connectedness and high duration, 2) youth who report high connectedness, but low duration, 3) youth who report low connectedness, but high duration, and 4) youth who report both low connectedness and low duration.

### *Method*

#### *Participants*

Analyses conducted in this chapter are based on responses from 868 youth (72% of the overall sample) who reported on their current participation in a school or community activity at the time of data collection.

#### *Measures*

##### *Activity Participation Variables*

The three activity participation variables used in the last chapter (i.e., activity type, connectedness to adults in programs, participation duration) are used in this

chapter. Activity type is a categorical variable comprised of 4 groups: sports ( $n = 435$ , 50%), performing and fine arts ( $n = 158$ , 18%), academic clubs ( $n = 113$ , 13%), and community/faith-based programs ( $n = 109$ , 13%). Two continuous activity participation variables, connectedness to adults ( $M = 29.40$ ,  $SD = 5.63$ ;  $\alpha = .89$ , 7 items) and participation duration ( $M = 1.90$ ,  $SD = .86$ ), are also assessed. The sum scale for each of these variables was used.

Connectedness to Adults in Programs X Participation Duration. A Connectedness to Adults in Programs X Participation Duration variable was created to test for significant differences in reported level of autonomous motivation depending upon youth reporting above- vs. below-mean levels of connectedness to adults in programs (1 = *above mean connectedness*, 0 = *below mean connectedness*) and above- vs. below-mean levels of participation duration (1 = *above mean duration*, 0 = *below mean duration*). Thus, a categorical variable with the following 4 groups was created: 1 = *high connectedness/high duration*, 2 = *high connectedness/low duration*, 3 = *low connectedness/high duration*, and 4 = *low connectedness/low duration*.

Autonomous motivation. The Autonomous Motivation subscale is part of the larger Self-Regulation Questionnaire (SR-Q; Ryan & Connell, 1989), and measures the degree of internalization in specific domains. The scale was adapted to measure how autonomously motivated youth are in their reasons for participating in their program. This 6-item subscale is made up of the sum of the 3 items measuring identified regulation and the 3 items measuring intrinsic regulation ( $M = 33.14$ ,  $SD = 8.64$ ) ( $\alpha = .90$ , 6 items). A more extensive description of this scale is provided in previous chapters of this paper.

### *Participant Variables*

The same 4 individual and family variables that were used in the last chapter are also used here. They include 3 categorical variables (i.e., gender, age group, and SES/race) and 1 continuous variable (i.e., perceived parental support).

### *Plan of Analysis*

The General Linear Model (GLM) is used to examine whether youth participating in different activity types report significantly different levels of autonomous motivation. Findings reported in a previous chapter showed activity type was significantly associated with all individual and family characteristics, thus each participant variable was entered as part of an interaction term with activity type (e.g., Gender X Activity Type), and were also entered into each model as covariates. None of the interaction terms were significant, so each term was dropped, one at a time, from the model. All participant variables remained in the final model as covariates. Post hoc analyses revealed significant differences between activity types. The Bonferroni adjustment for multiple comparisons was used.

GLM was also used to assess relations between connectedness to adults in programs and autonomous motivation, as well as to assess relations between participation duration and autonomous motivation. Results from a previous chapter revealed a significant difference in youths' reported level of connectedness to adults by gender, as well as a positive association between youths' reported level of connectedness to adults in programs and parental support. Thus, 2 interaction terms, Connectedness to Adults X Gender and Connectedness to Adults X Parental Support, were entered into the model. The two interaction terms were significant, so post hoc analyses were conducted to examine these relations in closer detail.

For the model assessing relations between activity duration and autonomous motivation, findings from a previous chapter of this paper showed significant

differences in participation duration by the 4 SES/race groups, and significant differences in participation duration by age group. Thus, 2 interaction terms, Participation Duration X Race/SES and Participation Duration X Age Group, were entered into the model to test their contribution to autonomous motivation. Neither of these interaction terms was significant, so they were removed, one at a time, from the model. The final model included all participant variables as covariates. Finally, significant differences in reported level of autonomous motivation depending upon youths' reports of high vs. low connectedness to adults and high vs. low participation duration were also assessed.

### *Results*

#### Associations Between Activity Type and Autonomous Motivation

The overall model testing significant differences in youth's reported level of autonomous motivation depending upon youths' participation in different activity types, holding all other variables constant (i.e., gender, age group, parental support, and SES/race), was significant,  $F(9, 617) = 15.47, p < .0001, \eta^2 = .186$ . Post hoc analyses revealed that sport participants reported significantly higher autonomous motivation compared to those in community programs/faith-based programs ( $p < .01$ ), and compared to those in academic clubs ( $p < .0001$ ). Performing and fine arts participants also reported higher autonomous motivation than those in academic clubs ( $p < .0001$ ).

#### Associations Between Connectedness to Adults and Autonomous Motivation

The overall model testing relations between connectedness to adults in programs and autonomous motivation, holding all other variables constant, was significant,  $F(9, 617) = 21.75, p < .0001, \eta^2 = .244$ . As expected, connectedness to adults in one's activity was positively associated with autonomous motivation, such

that with every unit increase in connectedness to adults, there was an expected increase of 1.23 for autonomous motivation,  $\beta = 1.23$ ,  $t(617) = 5.98$ ,  $p < .0001$ .

#### *Connectedness to Adults in Programs X Parental Support*

The interaction term, Connectedness to Adults in Programs X Parental Support on autonomous motivation was significant,  $F(1, 617) = 9.47$ ,  $p < .01$ ,  $\eta^2 = .015$ . As seen in Figure 4, the main effect of connectedness to adults in programs showed that the more connectedness to adults in programs youth report, the more autonomous motivation they report. This was the case across all levels of parental support – low, moderate, and high.

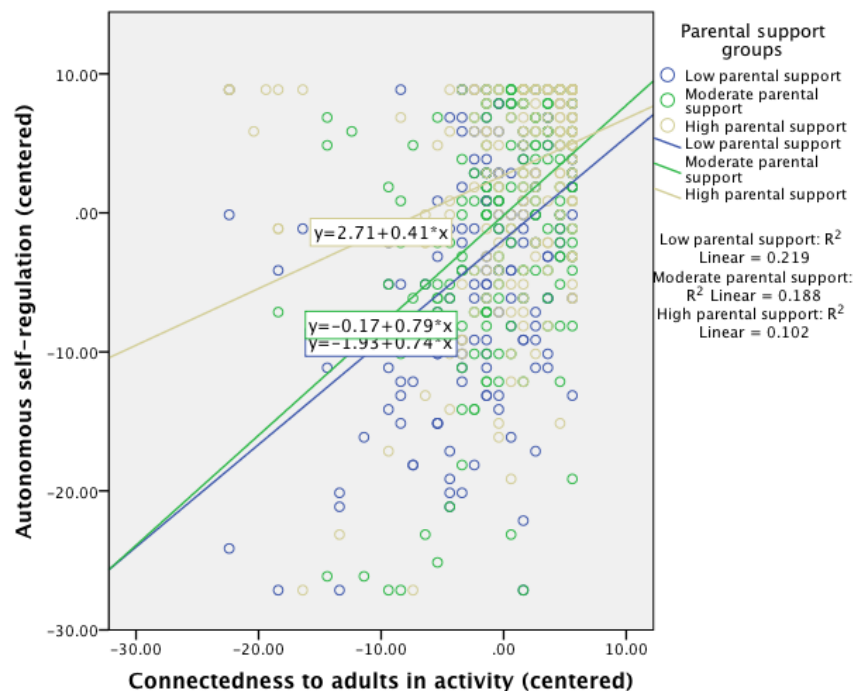


Figure 4. Significant Interaction Effect Showing the Stronger Effect of Connectedness to Adults in Programs on Autonomous Motivation for those with Low to Medium Parental Support.

Also shown in Figure 4, having high parental support seemed to matter the most in situations where youth reported low connectedness to adults in programs.

However, one could also say that connectedness matters more for those with low and moderate levels of support, as depicted by the steepness of the slope. Thus, it seems that connectedness to adults in programs has less of a strong relationship to autonomous motivation when there is high parental support. Furthermore, there is not much of a difference in the relationship between connectedness to adults in programs and autonomous motivation for youth with low parental support compared to moderate parental support. Also, youth who report low parental support and low connectedness to adults in programs seem to be in a double-deficit situation without either of these social assets. Overall, results show a stronger relationship between connectedness to adults in programs and autonomous motivation for youth with low to medium levels of parental support than those with high parental support.

#### *Connectedness to Adults in Programs X Gender*

A second interaction term, Connectedness to Adults in Programs X Gender, was also significant,  $F(1, 617) = 3.39, p < .10, \eta^2 = .006$ . However, as one can see in Figure 5, though there is a bit more of an impact of connectedness to adults in programs on autonomous motivation for girls than boys, this difference is not dramatic. The large sample size may have contributed to this significant result.

#### *Participation Duration*

The overall model assessing relations between participation duration and autonomous motivation, controlling for participant characteristics, was significant,  $F(7, 530) = 11.97, p < .0001, \eta^2 = .138$ . According to expectations, parameter estimates showed that for every unit increase in activity duration, there was a 1.85 unit expected increase in autonomous motivation, holding all other variables constant,  $\beta = 1.85, t(530) = 4.25, p < .0001$ . Neither interaction term (SES/Race X Participation Duration or Age Group X Participation Duration) was significant, so were dropped from the final model.

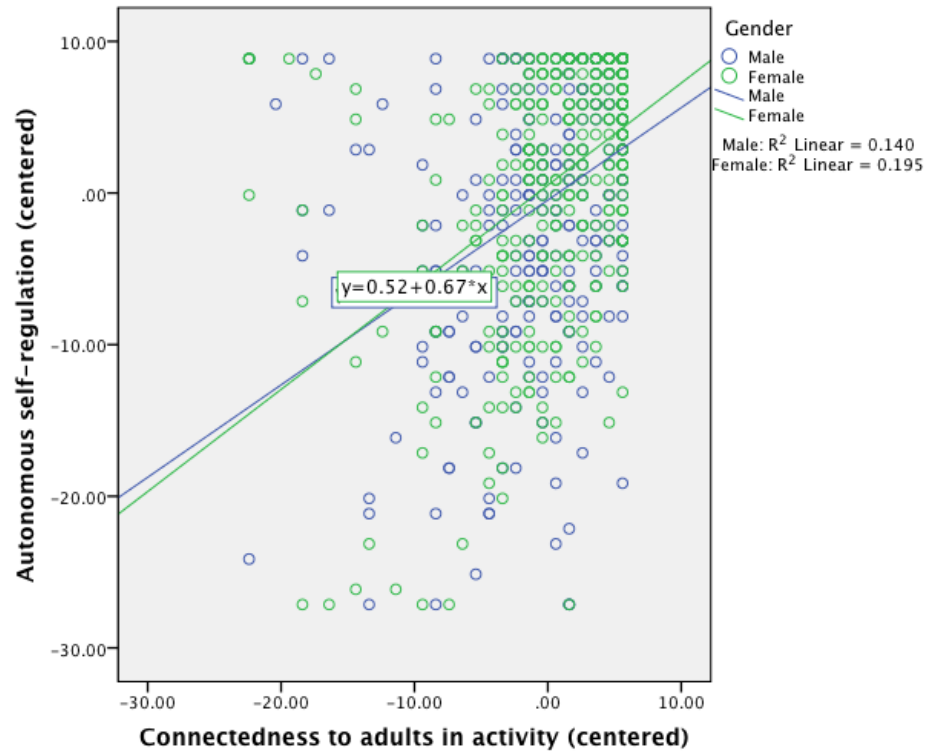


Figure 5. *The Marginally Significant Interaction Effect Showing A Stronger Effect of Connectedness to Adults in Programs on Autonomous Motivation for Girls Than Boys.*

#### *Above- vs. Below-Mean Levels of Connectedness to Adults and Duration*

Descriptive statistics, shown in Table 12, showed that most activity participants reported above-mean levels of connectedness and above mean levels of participation duration ( $n = 231$ , 35%), followed by those with above-mean levels of connectedness, but below-mean levels of participation duration ( $n = 207$ , 31%). The next largest group reported below-mean levels of connectedness and below-mean levels of participation duration ( $n = 132$ , 20%), followed by those with below-mean levels of connectedness, but above-mean levels of duration ( $n = 96$ , 14%).

Table 12. *Descriptive Statistics for 4 Participant Groups Varying in their Reported Level of Connectedness to Adults & Participation Duration.*

4 Connectedness X Duration Groups			Frequencies	
Group	Connectedness to Adults	Participation Duration	N	%
1	High	High	231	34.68
2	High	Low	207	31.00
3	Low	High	96	14.40
4	Low	Low	132	19.81
Total			666	100

\*Note: Complete data for both the connectedness to adults and the participation duration variables were only available for 666 (76%) of the 868 total activity participants.

The overall model testing for significant differences in reported level of autonomous motivation by the 4 Connectedness X Participation Duration groups, holding all participant characteristics constant, was significant,  $F(9, 515) = 16.30, p < .0001, \eta^2 = .225$  (Table 13). Post hoc analyses with use of the Bonferroni adjustment for multiple comparisons showed that, as expected, youth who reported high connectedness to adults and high participation duration reported significantly higher

Table 13. *Post Hoc Results Showing Differences in Autonomous Motivation By the 4 Above- vs. Below-Mean Levels of Connectedness to Adults X Participation Duration Groups.*

Connectedness X Duration Groups	<i>M (SE)</i>	<i>M</i>	95% <i>CI</i>	
<i>Comparison group</i>		difference	Lower	Upper
High cn + High dur	35.93 (.64)			
<i>High cn + Low dur</i>		1.04	-1.26	3.35
<i>Low cn + High dur</i>		3.87***	1.13	6.62
<i>Low cn + Low dur</i>		8.24****	5.57	10.92
High cn + Low dur	34.88 (.64)			
<i>Low cn + High dur</i>		2.83	-0.05	5.71
<i>Low cn + Low dur</i>		7.20****	4.47	9.93
Low cn + High dur	32.05 (.92)			
<i>Low cn + Low dur</i>		4.37***	1.27	7.47
Low cn + Low cn	27.68 (.83)			

\* $p < .05$  \*\* $p < .01$  \*\*\* $p < .001$  \*\*\*\* $p < .0001$



autonomous motivation compared to those who reported low connectedness and low duration ( $p < .0001$ ), and compared to those who reported low connectedness, but high duration ( $p < .001$ ) (Table 13). Youth who reported high connectedness, but low duration reported significantly higher autonomous motivation compared to those who reported low levels of connectedness and low duration ( $p < .0001$ ). Youth who reported low connectedness, but high duration also reported higher autonomous motivation compared to those reporting low connectedness and low duration ( $p < .001$ ).

### *Discussion*

While previous studies have demonstrated positive relations between youths' organized activity participation and greater internalization (e.g., Gestsdottir et al., 2011), calls have been made to identify the specific features of activity settings and patterns of activity participation that may promote internalization processes, and to understand the moderating effects of participant characteristics in those relations, especially among economically and ethnically diverse youth. Results from this chapter showed that the type of activity youth participate in, as well as their reported level of connectedness to adults in their program, their participation duration, and the joint contribution of how connected they feel to adults and their participation duration matter when it comes to how autonomously motivated youth are. Furthermore, in some cases, results showed that individual and family characteristics moderated these relations.

First, results showed significant differences in reported autonomous motivation depending upon youths' participation in 4 activity types, controlling for characteristics of the participants and their families. Post hoc analyses revealed, for example, that sports participants reported higher autonomous motivation compared to those participating in community/faith-based programs and academic clubs, and that those

participating in performing and fine arts programs reported higher autonomous motivation compared to those in academic clubs. As noted in Chapter 3, boys and high SES White youth had significantly greater odds of participating in sports than in community/faith-based programs and academic clubs. Girls and youth with high parental support had significantly greater odds of participating in performing and fine arts programs than in academic clubs. While not possible to determine causality due to this study's use of cross-sectional data, there are some factors that could be illuminated regarding youths' selection into activities known to differ in the types of developmental experiences they afford. Such insights may provide clues about key variables that can be investigated further in future research.

The second set of results presented in this chapter showed connectedness to adults in programs was positively associated with autonomous motivation, controlling for participant characteristics. This result was not surprising, as previous studies have highlighted the importance of supportive adult relationships to adolescents' development of a coherent and well-integrated self (e.g., Harter, 2006; Deci & Ryan, 2002; Lerner et al., 2005). However, the use of Whitlock's (2007) connectedness to adults scale helps shed light on what it is about the nature of youth-adult relationships that supports how autonomously motivated youth are about their activity participation. Whitlock's (2006) scale captures adolescents' "psychological state in which individual youth perceive that they *and* other youth are cared for, trusted, and respected by adults, individually and collectively" (p. 501). Furthermore, the scale measures the extent to which youth feel they (and other youth) care about and trust adults in their program. Thus, these results provide evidence that the reciprocal individual and collective feelings of care, trust, and respect are characteristics of youth-adult relations that supports youths' autonomous motivation within programs.

Two interaction terms were significant. The first significant interaction, Connectedness to Adults in Programs X Parental Support, showed that the more connectedness to adults youth report, the more autonomous motivation they report, regardless of how much (or how little) parental support they had. However, having higher parental support seemed to matter more for those youth who reported low connectedness to adults in programs. An alternative interpretation is that connectedness to adults in programs has less strong of a relationship to autonomous motivation when there is high parental support. Furthermore, there was little difference in the strength of the relationship between connectedness to adults in programs and autonomous motivation for those with low parental support compared to those with moderate parental support.

We may consider this result in relation to Whitlock's (2006, 2007) finding that a positive relationship with at least one parent increases the likelihood of feeling connected to adults at school and/or in one's community. This finding also speaks to Larson's (2009) hypothesis regarding redundant resources. Thus, in this sample, it seems to be the case that those youth who are participating in programs while being supported by at least one parent do benefit from connectedness to adults in programs, but do not benefit to the extent that those with low to medium levels of parental support do. Rather, it seems that the youth who are lacking support in one developmental domain receive a supportive boost from the other developmental domain. This is good news for those youth who are in the greatest need of parental and/or non-parental adult support.

The second significant interaction term, Connectedness to Adults in Programs X Gender, showed that the relationship between connectedness to adults in programs and autonomous motivation was much higher for girls than for boys. This result was not surprising considering Karcher and Sass (2010) found girls reported higher

connectedness to non-parental adults across several developmental domains (e.g., friends, school, teachers, neighborhood). Another study showed youth with the strongest capacity for self-regulation (using the SOC framework) benefitted most from their out-of-school time activities in terms of PYD outcomes, and that these relations were strongest among girls (Urban et al., 2010). It may be that boys and girls engage in different reflective practices that support or hinder their formation of a coherent and stable self (Harter, 2006; Habermas & De Silveira, 2008). For example, girls may not only integrate reasons for participating in an activity into the self-system in a different manner than boys, but they may also seek out opportunities for connectedness with adults and maximize those experiences and interactions in service of their own development.

Findings also showed that participation duration is positively associated with autonomous motivation, controlling for characteristics of the participant. This result confirms previous findings showing that longer exposure to supports and opportunities within programs is associated with more positive outcomes (Fauth et al., 2007), while also providing evidence linking participation duration with autonomous motivation. No significant differences in autonomous motivation by the 4 SES/race groups were found, contrary to Larson's (2009) hypothesis that lower-income youth may benefit from longer duration compared to their higher-income peers.

One possible explanation is that longer duration does matter more for lower SES youth when it comes to other youth outcomes, but not when it comes to autonomous motivation. Another explanation is that these results are based on a sample of high- and low-SES White and non-White youth attending the same high school. Thus, there may not have been enough diversity in the range and quality of programs BHS youth were participating in since these youth attended the same high school and lived in the same city. A future study may consider assessing these

relations using a nationally representative data set. Another possibility is that other factors may be more important to autonomous motivation than participation duration, such as connectedness to adults in programs. Results from this chapter, for example, showed that youth who report low participation duration but high connectedness to adults in programs, reported significantly higher autonomous motivation compared to youth who reported low participation duration and low connectedness to adults.

Assessing differences in autonomous motivation between the 4 groups who differ in their above- or below-mean levels of connectedness and participation duration showed that both connectedness to adults in programs and participation duration matter when it comes to autonomous motivation, and that it's best if participants have the opportunity to sustain their involvement in programs where they report feeling connected to adults. Thus, it was encouraging to find that 35% of activity participants in this sample reported this pattern of participation (i.e., high connectedness to adults and high participation duration), while 31% reported high connectedness to adults, but low duration. Results also provided evidence that without the presence of supportive relationships with positive adult leaders, the length of time youth spend in the program seems to matter less when it comes to autonomous motivation. However, having longer participation duration without high connectedness seems more advantageous to youths' autonomous motivation than having low participation duration and low connectedness to adults. This suggests that that if both of these participation assets are not available, having at least one of these assets seems to benefit youths' autonomous motivation.

There may be, however, other ecological assets in programs that encourage sustained participation outside of having an adult leader youth feel connected to. Perhaps some youth don't value or feel they benefit from relations with adults, so they don't seek out those types of interactions or don't attend to them, even if such supports

are available. Instead, they may attend to other assets that support their growth and development, such as developing skills, initiating and developing friendships, or just having fun. Those factors and their contribution to autonomous motivation in programs could be the focus of future research.

## CHAPTER 5

### Associations Between Autonomous Motivation and Adolescent Well-Being

Chapter 5 investigates links between autonomous motivation and indicators of adolescent well-being (i.e., life satisfaction, positive affect, negative affect, physical symptoms, psychological resilience, GPA).

#### *Chapter 5 Research Questions and Hypotheses*

*Research Question 7:* How does autonomous motivation in programs relate to the following indicators of adolescent well-being?

- a) Life satisfaction
- b) Positive affect
- c) Negative affect
- d) Physical symptoms
- e) GPA
- f) Ego-resilience

*Hypothesis 7:* Autonomous motivation will be positively associated with life satisfaction, positive affect, GPA, and ego-resilience, and will be negative associated with negative affect and physical symptoms.

#### *Introduction to Chapter 5*

In Chapters 3 and 4, we determined participant characteristics that are significantly associated with key features of activity participation and features of activity participation that are significantly associated with autonomous motivation. We now turn our attention towards investigating relations between autonomous motivation and indicators of adolescent well-being (i.e., life satisfaction, positive affect, negative affect, physical symptoms, ego-resilience, GPA). The potential moderating effects of individual and family characteristics shown to be related to autonomous motivation (i.e., gender, parental support, and SES/race) will be assessed.

While not testing a mediation model because of this investigation's use of cross-sectional data, results will nonetheless provide some of the key pieces of evidence that suggests autonomous motivation as a potential mechanism of development in the link between specific features of activity participation and adolescent well-being.

All young people have inherent strengths, talents, and interests that promote their capacity for thriving and well-being. However, the realization of that potential also depends upon the availability of environmental supports in the multiple contexts in which youth develop (e.g., Damon, 2005; Lerner et al., 2003). Low-income has been linked to decreased well-being among children and adolescents (e.g., increased internalization problems; Gershoff et al., 2003), delayed cognitive development (e.g., Brooks-Gunn & Duncan; Ackerman et al., 2004), and decreased physical well-being (e.g., Evans & English, 2002).

Participation in school activities and community programs, however, has been shown to provide key supports and opportunities that benefit youth in several developmental domains. The benefits of participation include, but are not limited to, more positive academic outcomes (e.g., higher grades, school value; Fredricks & Eccles, 2005, 2006, 2008), more positive psychosocial outcomes (e.g., heightened resilience; Fredricks & Eccles, 2008), and decreased internalizing (e.g., reduced depression; Bohnert et al., 2013; Gardner et al., 2012) and externalizing behaviors (e.g., reduced delinquency; Gardner et al., 2009). Some studies have shown that these effects are stronger for high-risk youth (e.g., decreases in aggression and crime; Mahoney, 2000).

Links between youths' activity participation and well-being have also been established. Palen and Coatsworth (2007) found, controlling for background characteristics of the participants, that youths' participation in self-defining activities (i.e., activities that represent who the participant is or would like to become) is



significantly related to wellness (i.e., life satisfaction, positive/negative affect). Another study by Coatsworth et al. (2007) found that 3 identity experiences (i.e., personal expressiveness, flow, goal-directed behavior) were significantly related to lower delinquency and increased wellness.

While studies by Coatsworth and his colleagues (2007; Palen & Coatsworth, 2007) have demonstrated positive associations between youths' participation in activities they feel define who they are or who they want to become and well-being, their conclusions are based on a sample comprised of 94% White middle-income youth. Furthermore, in their studies, only life satisfaction and positive/negative affect were assessed, while physical symptoms (Diener et al., 1985), an important indicator of well-being, were not. Physical symptoms, in addition to life satisfaction and positive/negative affect, are assessed in most studies related to Self-Determination Theory (Deci & Ryan, 2002; Reis et al., 2000). They are also assessed in studies linking autonomous functioning to adolescent well-being (Soenens et al., 2007). Furthermore, examining physical symptoms is important when studying economic disparities and youth outcomes, as low-income has been associated with decreased physical well-being (e.g., Evans & English, 2002).

Other indicators of adolescent well-being, like GPA, are also important to consider as lower high school achievement has been reported among low-income youth compared to their higher-income peers (Leventhal & Brooks-Gunn, 2004). Furthermore, activity involvement is known to benefit youths' academic outcomes (e.g., Fredricks & Eccles, 2006; Marsh & Kleitman, 2002), and autonomous motivation has been associated with higher grades (Patrick, Anderman, & Ryan, 2002; Ryan et al., 1994; Black & Deci, 2000; Vansteenkiste et al., 2004).

Psychological resilience is another important indicator of adolescent well-being that should be assessed. Calls have been made to design and implement

programs that account for differences in the meaning or expression of processes that support resilience among diverse (e.g., racial, ethnic, SES) youth (Seidman & Pedersen, 2003). Though the potential role of organized activities in promoting resilience is often discussed in the literature, only a few studies have tested this factor to determine its relationship with youths' activity participation.

One exception was Fredricks and Eccles' (2008) study which found that activity participation was associated with higher than expected resiliency (among other outcomes) in a sample of African American and European American adolescents. These findings differed, however, depending upon the type of activity youth were participating in (i.e., school clubs, school sports teams, out of school recreational activities). Their measure of psychological resilience was adapted from a scale developed by Furstenberg et al. (1999), and included items such as, "how often they are very good at:" figuring out programs and planning how to solve them, and carrying out the plans you make for solving problems. Their findings showed, for example, after controlling for participant characteristics, prior levels of the dependent variable, and involvement in the other two activity contexts, that participation in school clubs at 8<sup>th</sup> grade predicted higher resiliency. However, the paucity of low-SES White youth in their sample limited their conclusions about the role of SES in those relations (Fredricks & Eccles, 2008). Thus, this chapter tests the relationship between autonomous motivation and resilience in this study sample that includes high- and low-SES White and non-White youth, while adopting a more extensive measure of psychological resilience, the Ego-Resilience Scale developed by Block and Kremen (1996) which defines psychological resilience as, "the capacity of the individual to effectively modulate and monitor an everchanging complex of desires and reality constraints" (p. 359).

## *Method*

### Participants

Results in this chapter are based on the data from youth in this sample who reported on their current participation in a school activity or community program ( $n = 868, 72\%$ ).

### Measures

#### *Program Participation Variables*

Autonomous motivation. To reiterate, the Autonomous Motivation subscale measures the degree to which youth internalize reasons for participation in their activity that originate from outside the self into the self-system. The 6-item subscale is the sum of the 3 items measuring identified regulation (e.g., “I think participating in my activity is a useful way to learn skills”) and the 3 items measuring intrinsic regulation (e.g., “I participate for the excitement I feel when really involved in my activity”). The subscale was found to be highly reliable in this sample of adolescents (6 items,  $\alpha = .90$ ) ( $M = 33.14, SD = 8.64$ ).

#### *Adolescent Well-Being*

While a more detailed theoretical discussion of the selected indicators of adolescent well-being, their relevance to the current investigation, and the properties of each scale were presented in Chapter 2, a brief review of these scales is now provided.

Life satisfaction. Diener et al.’s (1985) Satisfaction with Life Scale was used to assess youths’ life satisfaction (e.g., “The conditions of my life are excellent”). The sum scale of the 5 items was used (5 items,  $\alpha = 0.87$ ) ( $M = 25.38, SD = 6.85$ ).

Positive and negative affect. Youth completed the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988) that consisted of 10 positive (e.g., proud) and 10 negative (e.g., afraid) affective states. Participants indicated the extent to which

they generally felt that way on the day data was collected. A 5-point scale was used. Scores were summed to create 2 scale scores: positive affect (5 items,  $\alpha = 0.84$ ) ( $M = 13.59$ ,  $SD = 5.80$ ) and negative affect (5 items,  $\alpha = 0.75$ ) ( $M = 7.63$ ,  $SD = 3.51$ ).

Physical symptoms. Emmons' (1991) 9-item symptom checklist assessed whether youth were experiencing physical sensations or symptoms that day (e.g., headaches, stomachache/pain, acne/pimples). A score of 1 was assigned if the participant was experiencing the symptom that day, and a score of 0 was assigned if the participant was not experiencing the symptom that day. Responses were summed (10 items,  $\alpha = 0.60$ ) ( $M = 1.54$  ( $SD = 1.64$ )).

Ego-resilience. The 14-item Ego-Resilience Scale (Block & Kremen, 1996) was used to assess youths' psychological resilience on a 4-point Likert scale (e.g., "I usually think carefully about something before acting") (14 items,  $\alpha = 0.84$ ) ( $M = 43.30$ ,  $SD = 7.04$ ).

GPA. Self-reported GPA was used to measure school performance ( $M = 87.61$ ,  $SD = 10.24$ , min = 20.00, max = 109.00).

#### *Individual and Family Characteristics*

The same 4 participant characteristics examined in previous chapters are also assessed in this chapter: gender (0 = *male*, 1 = *female*), age group (0 = *13-15 years old*, 1 = *16-19 years old*), SES/race (1 = *high SES White youth*, 2 = *high SES non-White youth*, 3 = *low SES White youth*, 4 = *low SES non-White youth*), and parental support (sum score of 6 items,  $\alpha = 0.93$ ) ( $M = 22.44$ ,  $SD = 6.19$ ).

#### *Plan of Analysis*

The General Linear Model (GLM) was used to test whether autonomous motivation was significantly associated with each indicator of adolescent well-being. Beta coefficients indicated each variable's contribution to the overall model. Post hoc analyses were run to assess potential differences in these relations among the SES/race

groups. Results showed that differences between the 4 SES/race groups were mainly between the high SES White group and the 3 other SES/race groups. The few significant differences between the other SES/race groups were no longer significant after applying the Bonferroni correction for multiple comparisons. Thus, the high SES White group was used as the reference group in the final model. Interaction terms were entered into the model to test for the potential moderating effects of participant characteristics found in a previous chapter to be significantly associated with autonomous motivation (i.e., gender, parental support, SES/race). None of the interaction terms were significant, so they were dropped, one at a time, from the final model. The participant variables remained in the model as covariates.

### *Results*

#### Associations between Autonomous Motivation and Adolescent Well-Being

The bivariate correlations between autonomous motivation and the indicators of adolescent well-being are as follows: life satisfaction ( $r = .30, p < .01$ ), physical symptoms ( $r = -.01$ ), positive affect ( $r = .26, p < .01$ ), negative affect ( $r = -.04$ ), psychological resilience ( $r = .45, p < .01$ ), and GPA ( $r = .13, p < .01$ ). Some results confirmed the expectation that autonomous motivation would be significantly associated with higher well-being. Results showed significant positive associations between autonomous motivation and three indicators of adolescent well-being: life satisfaction, positive affect, and psychological resilience (Table 14). However, contrary to expectations, autonomous motivation was not significantly associated with negative affect, physical symptoms, or GPA. The overall model assessing the relationship between autonomous motivation and life satisfaction, holding all participant variables constant, was significant,  $F(7, 657) = 24.48, p < .0001, \eta^2 = .036$ . Regression coefficients showed that for every unit increase in autonomous

Table 14. *Standardized Regression Coefficients for Indicators of Adolescent Well-Being by Level of Autonomous Motivation.*

Predictor Variable	Indicators of Adolescent Well-Being					
	Life Satisfaction	Positive Affect	Negative Affect	Physical Symptoms	Psychological Resilience	GPA
Gender	-0.73	-0.26	1.05****	0.41***	0.75	1.75*
Age Group	0.22	0.19	-0.04	0.22	0.00	0.07
SES/Race <sup>a</sup>						
High SES non-White	-1.53**	0.34	0.45	-0.20	-0.30	-2.30*
Low SES White	-2.29***	-0.97	0.21	0.24	-1.70*	-8.77****
Low SES non-White	-2.51****	1.62**	0.21	-0.13	-0.13	-7.60****
Parental Support	0.41****	0.17****	-0.07**	-0.01	0.32****	0.20**
Autonomous motivation	0.14****	0.14****	-0.00	-0.00	0.30****	0.03
F-Value	24.48****	26.97****	0.05	0.03	111.27****	0.43
$\eta^2$	0.036	0.049	0.00	0.00	0.15	0.00

\*  $p < .05$     \*\*  $p < .01$     \*\*\*  $p < .001$     \*\*\*\*  $p < .0001$

Notes: 0 = male, 1 = female; 0 = 13-15 years old, 1 = 16-19 years old; 1 = high SES White, 2 = high SES non-White, 3 = low SES White, 4 = low SES non-White.

<sup>a</sup> For the SES/race variable, the high SES White group served as reference group in these analyses.

motivation, there was an expected increase of .14 for life satisfaction,  $\beta = .140$ ,  $t(657) = 4.95$ ,  $p < .0001$ .

The overall model testing associations between autonomous motivation and positive affect was also significant,  $F(7, 666) = 26.97$ ,  $p < .0001$ ,  $\eta^2 = .049$ . Results showed that for every unit increase in autonomous motivation, there was a .136 expected increase in positive affect,  $\beta = .136$ ,  $t(666) = 5.19$ ,  $p < .0001$ . Finally, the overall model testing associations between autonomous motivation and psychological resilience was highly significant,  $F(7, 627) = 111.27$ ,  $p < .0001$ ,  $\eta^2 = .152$ . Beta coefficients showed an expected increase of .300 in psychological resilience for every unit increase in autonomous motivation,  $\beta = .300$ ,  $t(627) = 10.55$ ,  $p < .0001$ .

### *Discussion*

Results from this chapter provide evidence that the extent to which youth are autonomously motivated to participate in their activity is positively associated with some indicators of adolescent well-being (i.e., life satisfaction, positive affect, psychological resilience), but not significantly associated with other aspects of well-being (i.e., negative affect, physical symptoms, GPA). Psychological resilience stood out as the factor with the strongest relationship with autonomous motivation. This result provides evidence linking autonomous motivation (shown in the last chapter to be significantly related to activity type), connectedness to adults in programs, and participation duration, with resilience. Thus, while Fredricks and Eccles (2008) found participation in school clubs in 8<sup>th</sup> grade predicted resiliency at 11<sup>th</sup> grade, results from this chapter highlight autonomous motivation as a potential mechanism of development through which activity participation may benefit resilience.

Results from this chapter also provided evidence of the positive association between autonomous motivation and life satisfaction, and between autonomous motivation and positive affect. The results confirmed some of the findings from a

study by Coatsworth and his colleagues (2005) linking youths' participation in self-defining activities with life satisfaction and positive affect. However, results from this chapter extend Coatsworth et al.'s (2005) findings that are based on a sample of middle-income White youth, by demonstrating these associations in an ethnically and economically diverse sample of youth. On the other hand, while Coatsworth et al. (2005) found decreased negative affect resulted from participation in self-defining activities, results from this chapter did not indicate a significant association between autonomous motivation in programs and negative affect. This may have resulted from Coatsworth et al.'s (2005) specific focus on self-defining activities compared to this study's focus on activities and programs in general, for which youth are likely to differ in the extent to which they feel those activities define who they are or would like to become.

A future study might identify the factors that encourage youth to join activities or programs that they feel defines who they are or want to become. It may also be of interest to assess those factors that help youth develop a personal connection to their activity during the course of their participation. For example, one might examine girls' perceptions of gender roles and expectations, and assess the influence of those perceptions on girls' selection into particular types of activities (e.g., sports vs. performing and fine arts). Furthermore, one might assess how girls' experiences within specific settings (e.g., all-girls sports vs. co-ed sports) confirm, challenge, or serve as opportunities for negotiating those gender roles and expectations.

On the other hand, results from this chapter did not reveal significant associations between autonomous motivation and negative affect, physical symptoms, or GPA. This was surprising as disclosure, as a means of harnessing participants' sense of self-efficacy in making stressors or emotions more controllable (Frattaroli, 2006), has been linked to decreased negative affect (Lyubomirsky et al., 2006),



decreased physical symptoms such as upper respiratory problems (Greenberg et al., 1996), and improved GPA (Pennebaker & Francis, 1996). Shedding light on these incongruent findings are findings from Frattaroli's (2006) meta-analysis of experimental disclosure studies. Results showed that the effects of experimental disclosure on well-being were stronger in studies that only included participants with physical health problems or a history of trauma or stressors, or studies that had samples comprised of older-than-college-aged participants. Thus, it may have been this sample's relatively small proportion of participants with physical health problems, perhaps due to the young age of the high school participants and/or the relatively small proportion of participants with a history of trauma or stressors, perhaps due to the relatively large number of high SES youth in this sample, that contributed to these incongruent results.

Divergent results may have also resulted from this study's use of the Autonomous Motivation subscale that was not intended to measure experiences in which a trauma has occurred, as is the case in experimental disclosure studies. This is not to say that youth engaged in school activities or community programs do not experience difficulties related to their participation, but that the nature of those challenges are not the same types of traumatic experiences that experimental disclosure participants are asked to disclose. Youths' reports on the Autonomous Motivation subscale have to do with intrinsic or identified regulation of behavior that is inherently more positive in nature (Ryan & Connell, 1989). Thus, it may not be surprising that autonomous motivation is not related to negative affect and physical symptoms to the same degree that disclosing about a traumatic experiences is related to those same variables.

Taken together, the results gleaned in Chapters 3, 4, and 5 have provided evidence that autonomous motivation may be the mechanism through which activity

participation effects life satisfaction, positive affect, and psychological resilience. Results also have provided evidence that activity type, connectedness to adults, participation duration, and interactions among these factors (e.g., high connectedness and high duration), are related to how autonomously motivated youth are about their program participation. While not able to determine causality in these relations due to the use of cross-sectional data, these results that are based on a large sample of high- and low-SES White and non-White youth have answered calls for research that identifies specific features of activity settings and of activity participation that influence youths' internalization processes (Gestsdottir et al., 2011). In addition, these results have responded to the need for assessing interindividual differences in those relations depending upon key characteristics of the participants, including SES and race/ethnicity (Gestsdottir et al., 2011).

A future study may draw upon longitudinal data collected from economically and ethnically diverse youth to test a meditational model in which autonomous motivation explains relations between the three features of program participation (i.e., activity type, connectedness to adults, participation duration) with life satisfaction, positive affect, and psychological resilience. Future work may also assess differences in these relations depending upon other characteristics of participation (e.g., activity breadth) and of participants (e.g., youths' perceptions of the social status, as well as the gender roles and expectations associated with certain types of activities) that are outside the scope of the current investigation.

## CHAPTER 6

### Youths' Reflective Practices About Program Experiences and Associations Between Reflective Patterns and Autonomous Motivation

Chapter 6 explores the nature of adolescents' reflective practices about their program experiences and assesses relations between reflection and autonomous motivation about program experiences.

#### *Chapter 6 Research Questions*

*Research Question 8:* What types of reflective practices do youth engage in about their program experiences?

*Research Question 9:* Can distinctive patterns of reflection about program participation be identified? If so, what do these patterns of reflection look like?

*Research Question 10:* Are there certain participant characteristics that are associated with greater odds of engaging in a particular reflective pattern?

*Research Question 11:* Do youth with different reflective patterns report significantly different levels of autonomous motivation?

#### *Introduction to Chapter 6*

Chapters 4 and 5 presented evidence linking key features of activity participation to autonomous motivation, and linking autonomous motivation to life satisfaction, positive affect, and resilience. This chapter focuses on exploring the types of reflective practices youth engage in about their program experiences, and identifying patterns of youth reflection and the participant characteristics associated with greater odds of engagement in a particular reflective pattern, compared to others. This chapter will also focus on testing whether youth with different reflective patterns report significantly different levels of autonomous motivation.

Adolescents' capacity to successfully navigate the challenges related to self-development not only depends upon their inherent capacity for self-understanding and

self-integration (Deci & Ryan, 2002), but also depends on the available supports in their immediate environment, supports that organized activities, which 70% of US students participate in, are known to provide (Lerner et al., 2005; Larson et al., 2006). Studies from the body of work on experimental disclosure provide strong evidence linking reflective practices (e.g., writing about a traumatic event, savoring a positive event) to enhanced self-efficacy in feeling stressors or emotions are more controllable (Frattaroli, 2006). Furthermore, participation in school activities and community programs are known to provide more opportunities for reflection compared to other youth settings (e.g., school, work) (Larson et al., 2006; Eccles & Barber, 1999), making them prime contexts for promoting autonomous motivation.

While promoting opportunities for youths' engagement in self-reflection has been discussed as a key learning experience that should be provided and encouraged by program leaders (Larson, 2006), very little is known about the nature of youths' reflective practices about their program experiences, including how these reflective practices may differ depending upon characteristics of the individual, and how these practices may relate to key outcomes like autonomous motivation. To provide insight into the study of youths' reflective practices about their program experiences and their associated outcomes, theoretical and methodological insights were gathered from bodies of research outside the organized activity literature as presented in a literature review by Ja (2008b).

Evidence gleaned from this literature review, including findings from studies on experimental disclosure, demonstrates that differences in the type of reflection a participant is asked to engage in (i.e., talking, thinking, writing) results in differences in the effects of disclosure on well-being (Lyubomirsky et al., 2006). For example, participants who processed a traumatic event through writing or talking reported improved life satisfaction and enhanced mental health (i.e., higher positive affect,

lower negative affect) due to the organizing effects of those forms of processing. On the other hand, participants who processed a traumatic event by thinking about it reported decreased mental health outcomes, perhaps due to the ruminative nature of this type of reflection (Frattaroli, 2006). Thus, it is important to account for the various ways individuals are inclined to reflect.

While evidence converges around the importance of environmental support in helping youth develop the capacity to construct a well-integrated self (Harter, 2006), who youth reflect with is also likely to make a difference in relations between reflective practices and autonomous motivation. The key role of supportive relationships with non-parental adults, including the important role of program leaders in providing youth with opportunities to draw out the meaning embedded in their activity experiences, have been highlighted (Dubois & Silverthorn, 2005; Larson, 2006). While this investigation has focused its attention on connectedness with adults in programs as a key environmental support, peer relations also play a significant role in the link between activity participation and youth outcomes (e.g., Fredricks & Simpkins, 2013). For example, boys' affiliations with deviant peers and unstructured socializing were shown to mediate relations between sports participation and boys' nonviolent delinquency (Gardner et al., 2009).

Adolescents' relationship with their parents also influences their preferences for particular types of activities, their ability to gain access to activities (e.g., financial resources), and their experiences in and interpretations of their activity experiences (Simpkins et al., 2013). For example, maternal depression history predicted less activity involvement, and this relation was mediated by family relationship quality (i.e., togetherness, frequency of fighting in the family, open communication) (Bohnert, Martin, & Garber, 2007). Thus, evidence shows youths' relationships with program leaders/teachers, peers, as well as parents, influence youths' program participation,

processes, and outcomes. Therefore, these relationships should be accounted for when examining differences in youths' reflective practices with others, and the relationship between those different types of reflective practices and autonomous motivation.

Insights into potential individual differences in youths' reflective practices and relations between those reflective practices and autonomous motivation are informed by Frattaroli's (2006) meta-analysis of 146 randomized studies of experimental disclosure, specifically the findings highlighting differences in the conditions under which experimental disclosure seems to work, and for whom experimental disclosure is most effective. Some of these same findings were discussed in Chapter 5.

For the purposes of this chapter, results from Frattaroli's (2006) meta-analysis are also used to shed light on the factors related to youths' reflective practices that may be associated with autonomous motivation about program participation. Her results showed that effect sizes tended to be larger in studies that: (a) only included participants with physical health problems, (b) only included participants with a history of trauma or stressors, (c) used samples with older-than-college-age study participants, (d) had more male participants, (e) had disclosure sessions that lasted at least 15 minutes, and (f) gave participants directed questions or specific examples of what to disclose.

Frattaroli (2006) also found that a number of variables that had been originally hypothesized to moderate the effects of experimental disclosure were not significantly related to effect size. These included: (a) psychological health selection criteria, (b) participant age (e.g., college-aged vs. older than college-aged), (c) participant ethnicity, (d) participant education level, (e) valence of disclosure topic, (f) focus of disclosure instructions, (g) time reference of disclosure instructions, and (h) mode of disclosure (hand writing, typing, talking).

Results from Frattaroli's (2006) study also provide insight into the potential mechanism through which reflection is thought to benefit participants. Self-regulation is a potential explanatory model in that it emphasizes heightened internal control which may provide a "new or stronger sense of self-efficacy for emotional regulation" such that challenges and stressors are more controllable, contributing to improvements in well-being, such as reductions in negative affect (Frattaroli, 2006, p. 825). Though SDT's concept of self-regulation (Self-Regulation Questionnaire; Ryan & Connell, 1989) does not account for reciprocal relations between person, environment, and behavior as other theories of self-regulation do (e.g., social cognitive self-regulation theory; Zimmerman, 1989; intentional self-regulation; Lerner et al. 2011), the idea of internal versus external perceived locus of control (deCharms, 1968) is at the heart of SDT's concept of autonomous motivation and self-determined behavior. Studies that have adopted Deci and Ryan's (2002) SDT framework have shown that an autonomy-supportive environment helps people feel that stressors and challenges are more controllable (Deci & Ryan, 2002) by encouraging an internal locus of control (deCharms, 1968) which benefits self-integration and social connection.

While results from Frattaroli's (2006) meta-analysis provide useful insights into the study of youths' reflective practices, most studies included in the meta-analysis are based on samples of college-age or -older participants, which may limit the applicability of those findings to high school adolescents. However, insights regarding potential age differences one may expect to find in relations between reflective practices and youth outcomes can be gathered elsewhere. Harter (2006), as well as Fischer and Lamborn (1989), have provided evidence that youth experience both cognitive advancements (e.g., ability to detect seemingly opposite self-attributes) and liabilities (e.g., inability to resolve those discrepancies in self-attributes) that relate to different outcomes depending upon whether youth are in early, middle, or late

adolescence. For example, middle adolescence is a particularly vulnerable time as advancements in cognition allow youth to detect seemingly “opposite” attributes (e.g., happy vs. sad), limitations in cognition pose challenges to creating higher-order abstractions that allow them to make sense of “opposite” attributes (e.g., moody). The inability to make sense of “opposite” attributes contributes to increased confusion and distress (Harter & Monsour, 1992).

Additional insight into the key factors that should be assessed in our exploration of youths’ reflective practices, as they occur among diverse youth in the real world, is provided by a study that adopted a person-centered approach to assessing individual differences in the characteristics and behaviors of online happiness seekers, and comparing happiness seekers in the real world to those participating in controlled experimental disclosure paradigms (Parks et al., 2012). Happiness seekers are those who engage in happiness-increasing exercises, such as writing gratitude letters, savoring happy memories, and doing acts of kindness on a regular basis (Sin & Lyubomirsky, 2009). This study provided greater perspective, as well as concepts, methodological tips, and a language for more carefully considering and assessing the nature of youths’ reflective practices.

Just as the behaviors of happiness seekers are shaped by their personal preferences (Parks et al., 2012), so is youths’ engagement in reflective practices likely to be shaped by their personal preferences (e.g., talk to others vs. write down their experiences). Furthermore, some individuals may adapt particular reflective practices according to what benefits them most (e.g., talking to friends vs. talking to parents). Limitations in the type or degree of youths’ social network or social support may influence whether and to what extent youth reflect with others. These factors are also important to account for as relationships with teachers, programs leaders, parents, and



peers are associated with different experiences processes, and associated outcomes when it comes to youths' activity participation (e.g., Bohnert et al., 2007).

Another insight gleaned from Park et al.'s (2012) study is that studying a single type of reflective practice at a time may not capture the complex nature of youths' reflective practices, as youth may combine several practices in their daily life (e.g., talking to friends at school and privately thinking about experiences when alone). Youth may also differ in the amount of time they spend engaging in a reflective practice or set of practices, and these variations are likely to be associated with different outcomes. For example, too much private thinking may result in ruminative behavior (recurrent negative thinking), which is both a consequence of, and precursor to, a depressed mood (Lyubomirsky & Nolen-Hoeksema, 1993; Ward, Lyubomirsky, Sousa, & Nolen-Hoeksema, 2003).

Certain types of reflection (e.g., actively working through problems) have been shown to be more advantageous than others (e.g., ruminating about problems), particularly those that promote a sense of personal control heighten a sense of agency in effectively regulating one's emotions (Frattaroli, 2006; Lepore et al., 2002). In the case of youths' reflective practices about program experiences, ones that foster youths' feelings of ownership, self-understanding, self-expression, and control, help youth work through difficult experiences, and savor positive experiences will likely be associated with higher autonomous motivation. Other types of reflection, such as those promoting ruminative behaviors that have been linked to increased anxiety and depression, will likely be associated with lower autonomous motivation (e.g., Lyubomirsky et al., 2006, Butler & Nolen-Hoeksema, 1994; Harter, 2006; Deci & Ryan, 2008; Fredrickson, 2001; Frattaroli, 2006).

The overall goal of this chapter is to explore new insights, concepts, and theory regarding youths' reflective practices about their program experiences. Specifically,

this part of the study was intended to: (a) assess the types of reflective practices youth engage in about their program experiences, (b) examine whether a “natural” structure emerges from the data that distinguishes groups of youth with particular patterns of reflection about their program experiences, (c) identify the individual and family characteristics that are significantly associated with greater odds of engagement in certain reflective patterns, compared to others, and (d) test relations between patterns of reflection about program experiences and autonomous motivation.

### *Method*

#### Participants

Results in this chapter are based on responses from those study participants who reported on their current involvement in a school activity or community program, including reports on the extent to which they engage in reflective practices about their program experiences ( $n = 868$ , 72% of the overall sample).

#### Measures

##### *Youths' Reflective Practices about Their Program Experiences*

As previously discussed, the measure of youths' reflective practices about their program experiences was adapted from a measure of biographical practices (e.g., reading biographies, writing in a diary) used in a study about adolescents' development of a coherent life narrative (Habermas & de Silveira, 2008). The piloting of the school-wide survey with undergraduate and high school students resulted in additional changes to the scale. Changes included adding items measuring other types of reflective practices (e.g., talking reflection), and items measuring who youth are engaging in that type of reflection with (e.g., talking to parents vs. talking to peers). The language was also edited so that the types of reflective practices were more indicative of youths' current reflective practices (e.g., share or post my activity experiences on-line vs. write a letter). The adapted measure begins with the statement,

“Sometimes I reflect about my after-school activity experiences in the following way.”

Youth then indicated how frequently they engage in each of the 9 biographical practices (e.g., “Talk to my parents or family members) from 1(*never*) to 9 (*very often*). Table 15 includes a complete list of items.

Confirmatory factor analysis with orthogonal rotation (Varimax) was conducted on the 9-items to identify types of reflective practices youth engage in about their program experiences. Factor analysis has been used in other studies assessing youth program participation (Lawford, Ramey, Rose-Krasnor, & Proctor, 2012). The Kaiser-Meyer-Olkin measure verified that the sampling adequacy was considered ‘good’ for analysis, KMO = .80, and all KMO values for individual items were > .77, which is well above the acceptable limit of .5 (Field, 2009). Bartlett’s test of sphericity,  $\chi^2(36) = 2167.11$   $p < .0001$ , indicated that correlations between the items were large enough to run a factor analysis. An initial analysis produced eigenvalues for each component of the data. Though a 3-factor solution resulting from an initial exploratory factor analysis would have also been adequate for use (i.e., talking reflection, thinking reflection, creative expressive reflection), a 4-factor solution was selected based on theory and previous findings highlighting important differences in the behaviors and associated outcomes of youths’ engagement in various types of talking reflection (i.e., talking to program leaders/teachers vs. talking to parents/peers). Thus, a 4-factor solution was selected which explained 75.02% of the total variance. Factor loadings after rotation are reported in Table 15.

The items clustering on the same components suggested component 1 represents *private and goal-related thinking reflection* ( $\alpha = .80$ ; 2 items) (39.72% total variance), component 2 represents *talking to parents and peers reflection* ( $\alpha = .77$ ; 2 items) (16.14% total variance), component 3 represents *creative expressive and*

Table 15. *Factor Loadings for the 9 Items Comprising the Reflective Practices About Program Experiences Scale (N = 759).*

Items	Component			
	1	2	3	4
1. Talk to my parents or family members.	.15	<b>.83</b>	.03	.30
2. Talk to my friends or peers.	.17	<b>.87</b>	.05	.18
3. Talk to program leaders (like coaches or mentors).	.29	.34	.05	<b>.72</b>
4. Talk to my teachers.	.08	.23	.27	<b>.82</b>
5. Write in my diary.	.02	.03	<b>.84</b>	.09
6. Create poetry, create art, or engage in other expressive activities.	.13	-.03	<b>.76</b>	.26
7. Share or post my activity experiences on-line (e.g., blog, webpage).	.50	.21	<b>.57</b>	-.12
8. Spend time privately thinking about my activity experiences.	<b>.90</b>	.14	.16	.10
9. Think about how my activity experiences relate to my goals.	<b>.83</b>	.16	.05	.29
Eigenvalues	3.58	1.45	1.05	.67
% of variance	39.72%	16.14%	11.70%	7.46%
Total % variance explained	75.02%			
$\alpha$	.80	.77	.63	.71

*on-line reflection* ( $\alpha = .63$ ; 3 items) (11.70% total variance), and component 4 represents *talking to program leaders and teachers reflection* ( $\alpha = .71$ ; 2 items) (7.46% total variance). The total amount of variance explained by the 4 factors was 75.02%. The 9-item program reflection scale had a high reliability of  $\alpha = .81$ .

#### *Autonomous Motivation about Program Participation*

The 6-item Autonomous Motivation subscale was used to measure the degree to which youth internalize reasons for engaging in a behavior that originate outside the self into the self-system. The 6-item subscale was found to be highly reliable with this sample (6 items,  $\alpha = .90$ ) ( $M = 33.14$ ,  $SD = 8.64$ ).

### *Individual and Family Characteristics*

Gender (0 = *male*, 1 = *female*) and age group (0 = *13-15 years old*, 1 = *16-19 years old*) are also assessed in this chapter. A continuous variable was used for parental support when using the General Linear Model (GLM) (sum score of 6 items,  $\alpha = 0.93$ ) ( $M = 22.44$ ,  $SD = 6.19$ ), while a dichotomous variable for parental support (0 = *below mean parental support*, 1 = *above mean parental support*) was entered when the multinomial logistic regression (MLR) model was used. Because results of the cluster analysis revealed 6 reflective profiles, and it was of interest to examine individual and family characteristics associated with each of the 6 profiles, a dichotomous high SES vs. low SES variable was used instead of the 4-group SES/race variable that was used in previous chapters. This was done to limit the number of comparisons made per analysis (i.e., 6 reflective profiles X 2 SES groups vs. 6 reflective profiles X 4 SES/race groups), as a higher number of comparisons contributes to increases in the degrees of freedom that results in a less powerful model (Field, 2009).

### *Plan of Analysis*

Cluster analysis was adopted as an appropriate analytic strategy in the exploration and identification of new constructs and theory related to youths' reflective practices about their program experiences. This approach was used to examine whether a "natural" structure distinguishing groups of youth with particular patterns of reflection about program experiences emerged from the data. Cluster analysis has been used in other studies that adopted a person-centered approach to the study of youth activity participation (Linver, Roth, & Brooks-Gunn, 2009). Decisions related to the process of conducting the cluster analysis were guided by the recommendations of Hair and his colleagues (Hair, Black, Babin, & Anderson, 2010),

as well as advice from a statistical consultant who was familiar with the specific aims of this study (Cornell Statistical Consulting Unit (CSCU), 2013).

Factor scores that had been saved from the factor analysis run on the 9 items assessing biographical practices were used as cluster variables. Since Varimax rotated factor scores are uncorrelated, using these scores as variables in the cluster analysis addressed issues of multicollinearity that arise due to implicit weighting in this type of analysis. Though a hierarchical 2-step process to cluster analysis is recommended when the number of clusters has not been hypothesized a priori, hierarchical methods are not the most efficient method when analyzing large samples, as in the case of this study. Thus, a non-hierarchical procedure was used to refine the cluster solution. Hair et al. (2010) also recommend computing a number of cluster solutions, and then choosing the best solution using a priori criteria, practical judgment, common sense, and theory. Thus, cluster solutions from 4 through 7 clusters were examined. A 6-cluster solution was selected as it provided a nuanced picture of well-differentiated reflective profiles, including the degree to which each profile engaged in distinct reflective practices, while not providing so much detail that the results became convoluted and unclear.

Initial assessment of the relations between reflective profiles and participant characteristics were conducted using cross-tabulations that described participants within each cluster by individual and family characteristics. Chi-squared tests were then run to determine whether the differences between clusters by participant characteristics were significant. Multinomial logistic regression (MLR) models were then run to identify the participant characteristics (e.g., gender, SES) that are significantly associated with greater odds of membership in certain reflective profiles, compared to others. This follows the procedure of other studies (Brody et al., 2012; Linver et al., 2009). Separate MLR models were conducted in which each of the 6

reflective profiles served as the reference group until comparisons between all profiles were made.

Finally, a series of multivariate analysis of covariance (MANCOVAS) models were run to test whether the level of autonomous motivation differed significantly by reflective profile. The General Linear Model (GLM) was used as it easily allowed for examining relations between both categorical and continuous predictor variables with continuous outcome variables, while testing for the potential moderating effects of participant variables. The use of GLM was recommended by a statistical consultant. None of the interaction terms were significant, so each was removed, one at a time, from the model. All participant variables were left in the final model as covariates. Post hoc tests using the Bonferroni adjustment for multiple comparisons revealed significant differences in the level of autonomous motivation reported by youth in the 6 reflective profiles.

### *Results*

#### Identifying Patterns of Youths' Reflective Practices about their Program Experiences

Results of the cluster analysis revealed 6 distinctive reflective profiles among activity participants in this sample. Cluster centers are presented in Table 16. Figure 6 provides a visual depiction of the frequency of engagement in 4 types of reflective practices (e.g., private/goal- related thinking) by each reflective profile. The first profile engaged in very high rates of talking to program leaders/teachers, and also engaged in a small degree of private thinking and talking to parents/peers. Thus, as this group is best characterized by their engagement in a diverse set of reflective practices, relative to other profiles, they were classified as the *Well-Balanced Reflectors*, which included the largest number of youth ( $n = 167$ , 22%). A second profile displayed very high rates of private/goal-related thinking and moderate rates of talking to parents/peers, so were classified the *Private Thinkers Who Talk to*

Table 16. *Cluster Centers for Youths' Reflective Practices About Their Program Experiences.*

Type of reflective practice	Six reflective profiles					
	Well-Balanced (N=167, 22%)	Private Thinkers Who Talk to Parent/Peers (N=141, 19%)	Non-Reflectives (N=141, 19%)	Only Talk To Parents/Peers (N=130, 17%)	Highly Reflective Creatives (N=110, 14%)	Private Thinkers Who <i>Don't</i> Talk to Parents/Peers (N=70, 9%)
Private/goal-related thinking	0.35	0.87	-0.72	-1.21	0.23	0.75
Talk to parents & peers	0.40	0.48	-1.12	0.76	0.33	-1.59
Creative expressive & on-line	-0.62	-0.32	-0.06	-0.29	1.88	-0.17
Talk to program leaders & teachers	1.00	-0.99	-0.37	-0.21	0.34	0.20

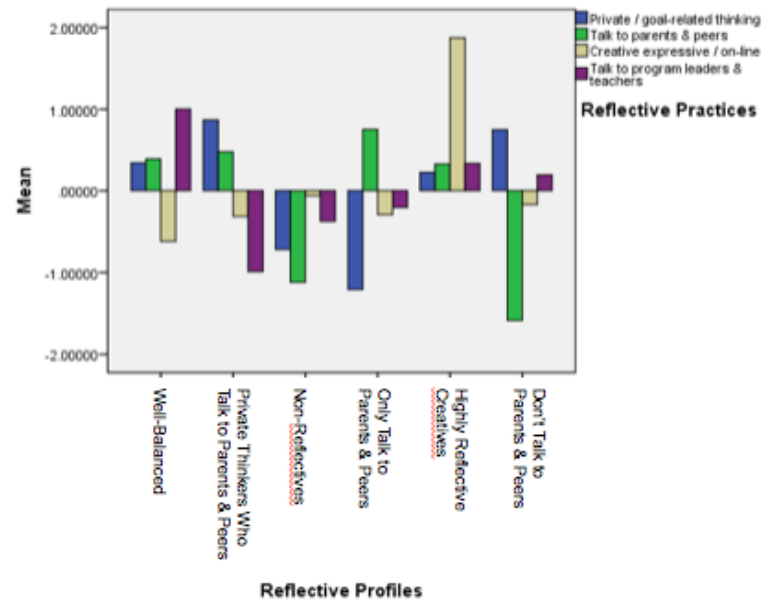


Figure 6. *Comparison of Six Reflective Profiles' Engagement in Four Types of Reflective Practices.*



*Parents/Peers* profile, constituting the next largest group (n = 141, 19%). A third profile showed a similar level of private/goal-related thinking as the second profile, but reported very low levels of talking to program leaders/teachers. Thus, this group of youth was classified as the *Private Thinkers Who Don't Talk to Parents/Peers* (n = 70, 9%). A fourth profile, the *Non-Reflectives* (n = 141, 19%), had very low engagement in all reflective practices. The *Only Talk to Parents and Peers* group had the highest rate of talking to parents/peers (vs. all other profiles), and had very low rates of engagement in all other reflective practices, especially private thinking (n = 130, 17%). Finally, the *Highly Reflective Creatives*, engaged in extremely high levels of creative expressive/on-line reflection (n = 110, 14%), as well as moderate levels of all other reflective practices, making them the most reflective profile.

#### Are Certain Participant Characteristics Associated with Greater Odds of Engaging in a Particular Reflective Pattern?

MLR was used to simultaneously examine which participant characteristics were significantly associated with greater odds of inclusion in a particular reflective profile, compared to other profiles. Likelihood ratio chi-squared tests were significant,  $\chi^2 = (20, N = 667) = 127.82, p < .0001$ . Table 17 shows mean scores and standard errors for the family characteristic, parental support (the only continuous variable), by reflective profile. For the remaining participant characteristics (all dichotomous variables), Table 17 shows the proportion of participants in each profile characterized by each participant variable. This table also provides a summary of results from the 6 MLR analyses. Clusters having a subscript in common are not significantly different from one another. The presentation of these findings follows the procedure of studies employing a similar analytical technique (e.g., Brody et al., 2012). So that all participant characteristics could be viewed in one table, the sum

Table 17. *MLR Results and Descriptive Statistics of Participant Variables for the Reflective Clusters.*

Participant Variable	Well-Balanced	Private Thinkers Who Talk to Parents/ Peers	Only Talk to Parents/Peers	The Highly Reflective Creatives	Private Thinkers Who <i>Don't</i> Talk to Parents/Peers	Non-Reflectives
Parental support*	25.15(.46) <sub>a</sub>	23.31(.50) <sub>b</sub>	24.07(.53) <sub>b</sub>	24.23(.57) <sub>ab</sub>	19.57(.75) <sub>c</sub>	19.43(.51) <sub>c</sub>
Female**	.49 <sub>ac</sub>	.58 <sub>c</sub>	.57 <sub>ac</sub>	.75	.38 <sub>ad</sub>	.43 <sub>cd</sub>
16-19 year olds**	.60 <sub>a</sub>	.46 <sub>b</sub>	.52 <sub>ab</sub>	.59 <sub>ab</sub>	.54 <sub>ab</sub>	.57 <sub>ab</sub>
High SES**	.71 <sub>ab</sub>	.78 <sub>a</sub>	.71 <sub>ac</sub>	.67 <sub>bc</sub>	.62 <sub>ac</sub>	.67 <sub>ac</sub>

*Note.* These computations are based on a multinomial logit with grouping by dependent variable (cluster) and participant variables as independent variables. Likelihood ratio chi-squared tests for each model were significant,  $\chi^2 = 127.82$ ,  $p < .0001$ ,  $df(20, 666)$ . Groups having a subscript letter in common are not significantly different from one another.

\*Standardized mean scores are presented for parental support.

\*\*Cells contain the percentage of participants in that cluster.

score for parental support (out of 30) for each reflective profile was re-scaled to match the scale of the other participant characteristics (% out of 100).

Results showed youth with higher parental support had significantly greater odds of inclusion in the Well-Balanced reflective profile, compared to all other groups, except the Highly Reflective Creatives. Those with higher parental support also had greater odds of inclusion in the Highly Reflective Creatives than the Private Thinkers Who Don't Talk to Parents/Peers and the Non-Reflectives. On the other hand, those with low parental support had greater odds of inclusion in the Non-Reflective group, compared to all other profiles (except the Private Thinkers Who Don't Talk to Parents or Peers group). Those youth with higher parental support also had greater odds of inclusion in the Only Talk to Parents/Peers than the Private Thinkers Who Don't Talk to Parents/Peers. Being high SES and being female was significantly associated with greater odds of inclusion in the Private Thinkers Who Talk to Parents/Peers than the Only Talk to Parents/Peers. Being High SES was also associated with greater odds of being a Private Thinker Who Talks to Parents/Peers than a Highly Reflective Creative. Being female was associated with greater odds of inclusion in the Highly Reflective Creatives than in any other reflective profile. Being older (16-19 years old) was associated with greater odds of being a Well-Balanced Reflector vs. being a Private Thinker Who Talks to Parents/Peers.

Do Youth with Different Reflective Patterns Report Significantly Different Levels of Autonomous Motivation?

The overall model in which all participant characteristics were entered as covariates, was significant,  $F(11, 610) = 16.51, p < .0001, \eta^2 = .233$ . Results showed there were significant differences in autonomous motivation by reflective profile,  $F(5, 610) = 21.12, p < .0001, \eta^2 = .150$ . Results of the post hoc analyses are provided in Table 18 and are visually depicted in Figure 7 where groups having a subscript in

Table 18. *Significant Mean Differences in Autonomous Motivation by Reflective Profile.*

Reflective profile	Comparison group	Autonomous motivation				
		<i>M</i> Difference	<i>M</i>	<i>SE</i>	95% CI	
Well-Balanced Reflectives			36.61	0.67	35.30	37.92
	<i>Highly Reflective Creatives</i>	3.16*				
	<i>Only Talk to Parents/Peers</i>	4.94*****				
	<i>Non-Reflectives</i>	9.20*****				
Private Thinkers Who Don't Talk to Parents/Peers			36.33	1.14	34.10	38.56
	<i>Only Talk to Parents/Peers</i>	1.39**				
	<i>Non-Reflectives</i>	8.92*****				
Private Thinkers Who Talk to Parents/Peers			35.05	0.72	33.63	36.46
	<i>Only Talk to Parents/Peers</i>	3.37*				
	<i>Non-Reflectives</i>	7.62*****				
Highly Reflective Creatives			33.45	0.84	31.81	35.09
	<i>Non-Reflectives</i>	6.04*****				
Only Talk to Parents/Peers			31.67	0.80	30.11	33.24
	<i>Non-Reflectives</i>	4.26**				
Non-Reflectives			27.41	0.77	25.90	28.93

\*  $p < .05$     \*\*  $p < .01$     \*\*\*  $p < .001$     \*\*\*\*\*  $p < .0001$

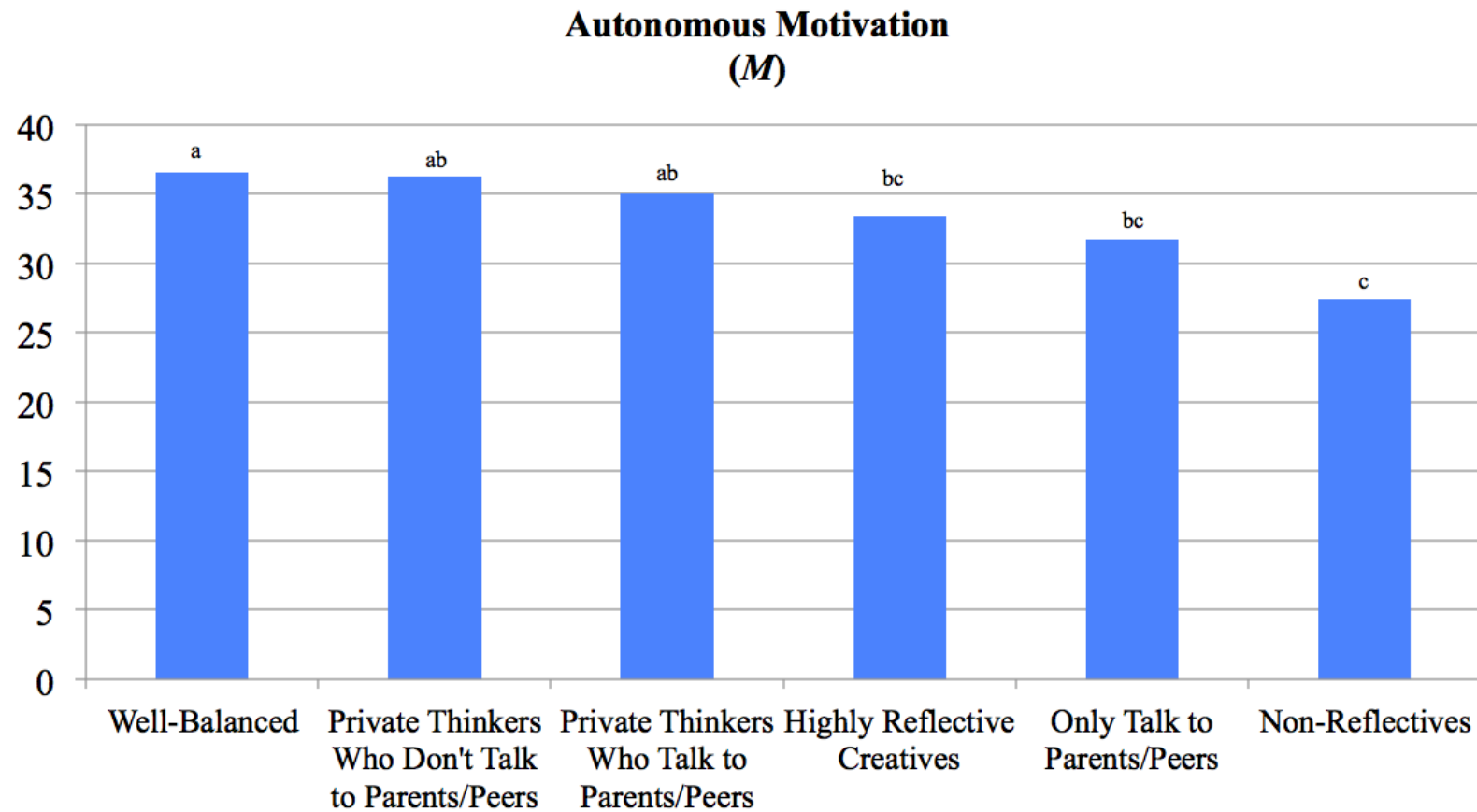


Figure 7. A Comparison of Mean Levels of Autonomous Motivation Among Six Reflective Profiles Where Groups Having a Subscript Letter in Common Are Not Significantly Different from One Another.

common are not significantly different from one another. Results showed that all profiles reported significantly higher autonomous motivation ( $p < .0001$ ), compared to the Non-Reflectives. The Only Talk to Parents/Peers profile reported significantly lower autonomous motivation compared to every other group, except the Highly Reflective Creatives ( $p < .001$  to  $p < .0001$ ). In addition, Well-Balanced Reflectives reported significantly higher autonomous motivation compared to Highly Reflective Creatives ( $p < .05$ ) and the Only Talk to Parents/Peers group ( $p < .0001$ ), but not compared to both groups of private thinkers. While both groups of private thinkers reported significantly higher autonomous motivation compared to the Only Talk to Parents/Peers group, this difference in autonomous motivation was greater for private thinkers who talk to parents/peers ( $p < .01$ ) than those private thinkers who don't talk to parents/peers ( $p < .05$ ).

### *Discussion*

Drawing upon insights gleaned from outside the body of literature on organized activities, this chapter set out to better understand the nature of youths' reflective practices about their program participation, individual differences in patterns of reflection, and associations between patterns of reflection and autonomous motivation, which was shown in Chapter 5 to be positively associated with aspects of well-being. While the beneficial effects of engaging adults in certain types of reflection (i.e., talking, thinking, writing) under controlled experimental conditions have been documented (Lyubomirsky et al., 2006), there was still a need to illuminate youths' reflective practices regarding their experiences in school activities and community programs known to positively influence development.

This chapter addressed several gaps in the literature. First, this chapter presented a measurement tool for assessing youths' reflective practices about their program experiences. While youth reflection in the context of activity participation is

often discussed as an important developmental experience (Larson, 2006), there was a lack of measurement tools to assess youths' reflective practices. Results of the factor analysis revealed 4 types of reflective practices that youth engage in about their program experiences: private/goal-related reflection, talking to parents and peers, creative expressive and on-line reflection, and talking to program leaders and teachers.

Second, patterns of youths' reflective practices about their program experiences as they are engaged in by diverse youth in the real world were identified. Employing cluster analysis as a person-centered approach facilitated the discovery of six reflective profiles that naturally emerged from the data: the Well-Balanced Reflectors, the Private Thinkers Who Talk to Parents/Peers, the Non-Reflectives, the Only Talk to Parents/Peers, the Highly Reflective Creatives, and the Private Thinkers Who Don't Talk to Parents/Peers.

Multinomial logistic regression was used to simultaneously consider the key individual and family characteristics that are significantly associated with greater odds of inclusion in a particular reflective profile, compared to other profiles. Results revealed, for example, that youth with higher parental support had significantly greater odds of inclusion in the Well-Balanced Reflectors group, while youth with low parental support had significantly greater odds of inclusion in the Non-Reflective group, compared to all other groups.

Finally, the last set of analyses conducted for this chapter revealed significant differences in autonomous motivation about program participation by youth with different patterns of reflection about their program experiences. For example, Non-Reflectives reported significantly lower autonomous motivation compared to all other reflective profiles.

## Recommendations for Practice

Characteristics of participants correspond to different patterns of reflection about program experiences, and these patterns of reflection correspond with significantly different levels of autonomous motivation. These results, therefore, may assist practitioners in identifying an individual's reflective pattern, so that specific supports and opportunities can be provided to that person to increase autonomous motivation so that well-being is improved and sustained engagement in quality programs is encouraged.

### *Encourage Reflection Through Meaningful Conversations with Program Leaders*

Results confirm that youths' engagement in reflective practices about their program experiences often takes place within the context of social relationships with teachers/program leaders, parents, and peers, all of whom have been shown in previous studies to play an integral role, in various ways, in the link between program participation and youth outcomes (Dubois & Silverthorn, 2005; Larson, 2006; Simpkins et al., 2013). Two profiles preferred talking a lot to others about their program experiences – the Well-Balanced Reflectives and the Only Talk to Parents/Peers. However, the personal characteristics and associated levels of autonomous motivation for these profiles demonstrate just how different these groups are. The Well-Balanced Reflectives balanced talking with program leaders/teachers with a more-well-rounded set of reflective practices. Furthermore, higher parental support was associated with greater odds of inclusion in the Well-Balanced Reflectives, and these youth also reported significantly higher autonomous motivation compared to most other reflective profiles, including the Only Talk to Parents/Peers.

In contrast, the Only Talk to Parents/Peers group did just that – they only talked to parents and peers and refrained from any other forms of reflection, especially private thinking. This group reported significantly less autonomous motivation about



their participation compared to most groups, except the Highly Reflective Creatives and the Non-Reflectives. This indicates that those who only talk to parents and peers, and don't balance their oral forms of reflection with more private forms of reflection, report less integration of the reasons for participating in their activity.

While Gestsdottir et al. (2011) found that youths' participation in organized activities predicted greater internalization, there was a need for identifying aspects of participation and features of activity settings that support this process. Findings from this chapter demonstrate that teachers and/or program leaders serve as important resources for youth as they learn to integrate into their self-system real-world learning that occurs within school and community programs (Larson, 2006). Results highlight that engaging in conversations about one's program experiences with teachers and program leaders seems most beneficial when it comes to autonomous motivation. In addition, findings indicate that reflecting about program experiences with teachers and program leaders enhances these processes in ways that reflecting about program experiences with parents and peers may not. This confirms the key role of positive non-parental adults to youth development (Dubois & Silverthorn, 2005; Dubois & Rhodes, 2006), and the benefits of connectedness to adults in schools (Whitlock, 2006). Findings also showed that high parental support was associated with greater odds of inclusion in profiles that reported higher autonomous motivation. Thus, perhaps, when it comes to youth reflection, there is no substitution for strong parental support, but if that is missing from a young person's life, it is the hope that non-parental adults are there to provide those supports if and when parents are unable or unwilling to do so.

#### *The Benefits of Moderate Degrees of Private Thinking Reflection*

While the results just described demonstrate the potential benefits of social relationships when it comes to reflection, especially conversations with teachers and

program leaders, other results shed light on the benefits of engaging in at least some degree of private reflection about one's program experiences. Youth who spend a lot of time privately thinking reported relatively moderate-to-high levels of autonomous motivation about their participation. There was no significant difference in reported autonomous motivation between both sets of private thinkers and the Well-Balanced Reflectors who reported the highest level of autonomous motivation. However, both groups of private thinkers reported significantly higher autonomous motivation compared to the Only Talk to Parents/Peers group and the Non-Reflectives. Therefore, results highlight the potential benefits of a moderate degree of private thinking reflection when one's tendency is to only talk to parents and peers, or not reflect at all.

#### *Are Highly Reflective Creatives Ruminating?*

The Highly Reflective Creatives stood out as the most reflective profile who reported moderate levels of autonomous motivation. Thus, it seems to be a case of diminishing returns where too much of a good thing, in this case overall engagement in reflective practices about one's program experiences, is associated with decreased autonomous motivation. This is reminiscent of the findings showing ruminative behavior (recurrent negative thinking), more present among girls, is a consequence of, and precursor to, a depressed mood (e.g., Ward, Lyubomirsky, Sousa, & Nolen-Hoeksema, 2003). Thus, it was not surprising that being female was significantly associated with greater odds of inclusion in the Highly Reflective Creative profile (vs. all other profiles). Furthermore, as shown in a previous chapter of this paper, girls have significantly greater odds of participating in performing and fine arts programs, where one would expect to find more opportunities for creative reflection.

Taken together, results seem to show that girls, while already being predisposed to more ruminative behavior associated with negative outcomes, like a

depressed mood (e.g., Ward et al., 2003), seem to select into the types of programs that may reinforce that behavior. Thus, practitioners may consider assessing youths' tendency for engaging in ruminative behavior, especially among girls, and encourage a more balanced set of reflective practices among those participants by structuring programs so that youth are engaged in both private creative forms of reflection, and more socially connective and expressively outward forms of reflection.

However, some creative activities within performing and fine arts may be more social in nature, such as cheerleading and school dance teams. Though outside the scope of the current investigation, preliminary analysis of the data at the level of individual programs revealed some interesting results. For example, school-based dance and cheerleading teams were contexts that low-income non-White girls who reported low parental support not only gravitated towards, but reported being highly motivated and autonomously driven to participate in these activities. This pattern was not shown in community-based (often paid for) dance programs.

#### *Encourage Non-Reflectives to Reflect*

In contrast to the Highly Reflective Creatives, the Non-Reflectives engaged in very little reflection, in general, especially talking to parents/peers. Thus, it made sense that youth who reported low parental support had significantly greater odds of inclusion in the Non-Reflective profile. Furthermore, Non-Reflectives reported significantly lower autonomous motivation about their program participation, compared to all other profiles. Thus, results suggest that encouraging some form of reflection, regardless of the type of reflection, seems to be better than not reflecting at all when it comes to autonomous motivation (Figure 8). These results highlight the need for practitioners to implement opportunities for youth to engage in purposeful reflection about their experiences, especially among the most non-reflective youth

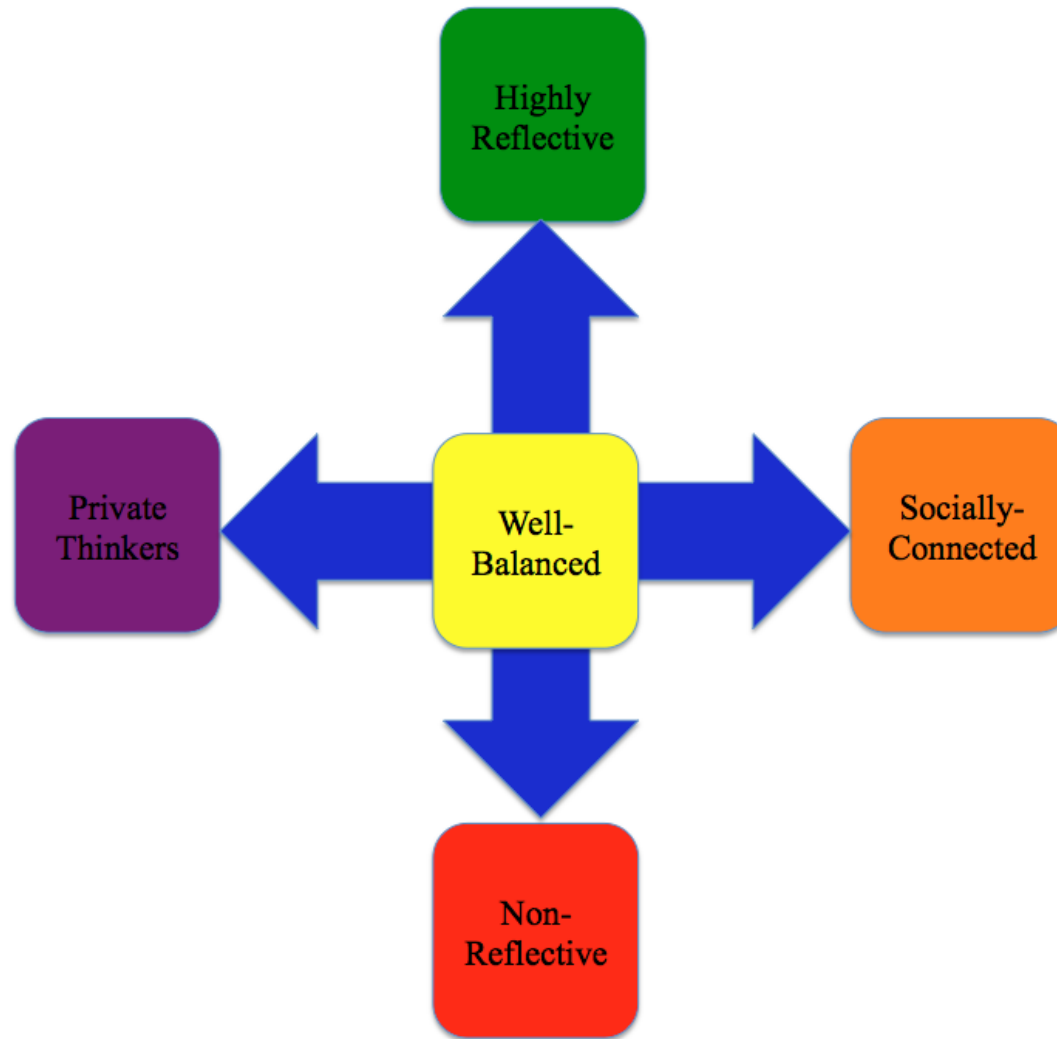


Figure 8. *A Moderate Well-Balanced Set of Reflective Practices is Optimal When It Comes to Internalization.*

### *Encourage A Balanced Set of Reflective Practices*

Overall results showed youth fall on a continuum from less social, introspective or private forms of reflection, to more socially extroverted forms of reflection, and that a well-balanced reflective style is most adaptive (Figure 8). Program leaders can use assessments to gauge youths' inclination towards specific reflective practices, and to examine the diversity of their set of reflective practices, so that they can better structure programs to fit the needs of individual youth. A more balanced set of reflective practices should be encouraged, particularly among those youth whose characteristics predispose them towards being at one extreme of the reflective continuum (e.g., being solely a talker), or the other extreme (e.g., being a ruminator). Self-focused rumination, for example, is thought to inhibit instrumental behavior by increasing uncertainty, resulting in further rumination and Behavioral paralysis (Ward et al., 2003). Thus, program leaders can encourage youth who tend to ruminate to engage in activities where they gain confidence in instrumental problem solving through active support by adults and peers.

### *Limitations and Recommendations for Future Research*

While this chapter provided insight into youths' reflective practices, processes, and associated outcomes, there were several limitations of this research that should be considered when developing future studies. First, limitations in resources, as well as challenges related to collecting data within a school, resulted in only being able to assess these factors using cross-sectional data. Furthermore, due to the time constraints and amount of data collected in a short time period, the short-version of the Self-Regulation Questionnaire (Ryan & Connell, 1989; Deci & Ryan, 2009) was used, resulting in fewer items from the Autonomous Motivation subscale that was a central focus of this investigation. Thus, despite the theoretical underpinnings of the SRQ and the many studies that validated its use across several domains and populations,

potential issues with internal and external validity may still exist. A future study may focus on validating the use of the SRQ, particularly the autonomous and controlled subscales, among a large representative sample of adolescents who are participating in organized activities.

More work is also needed that draws upon longitudinal data to identify causal mechanisms in relations between reflection and youth outcomes, including autonomous motivation. More work is also needed to assess the nature of interactions between youth and their parent(s) and peers, as well as between youth and their teachers and program leaders. Special attention should be paid to assessing these relations among youth who lack support at home to better understand how to foster reflection, autonomous motivation, and well-being among those youth in the greatest need of such support.

Age group was, surprisingly, not as important of a factor in profile membership, as was expected. Harter and Monsour (1992) found middle adolescents reported more distress and anxiety, compared to early and late adolescents, which was attributed to the ability of middle adolescents to detect opposing self attributes (e.g., happy at school vs. grumpy with parents), but inability to reconcile such seemingly opposing attributes (e.g., moody). Thus, it may have been the lack of early and/or late adolescents in this sample, and/or that differences between 13-15 year olds vs. 16-19 year olds in this sample were not different enough to detect significance. Thus, future studies may consider focusing the investigative lens on detecting age differences in patterns of reflection.

While the reflective practices measure was based on a previous measure of biographical practices (Habermas & de Silveira, 2008), was edited based on findings from experimental disclosure (Lyubomirsky et al., 2006), and included additional items based on piloting the survey with undergraduate and high school students, the

items comprising the reflective practices measure were not necessarily exhaustive. Future studies may consider studying other types of reflective practices about program experiences. For example, an additional item on the school-wide survey in this study had asked youth, “Is there another way you reflect on your experiences? (write it here) \_\_\_\_\_. Rate how often you do this (from 1 *never* to 9 *very often*).” While not included in this report, responses to this item included: play music, sing, doubt myself, text, hang out with my dog, work out, and read about it. These reflective practices may be a good starting point for future research.

Despite these limitations, results from this chapter demonstrated the benefits of drawing upon several analytical tools to provide a nuanced picture of youths’ reflective practices about their program experiences, as they occur in the real world, as they are shaped by youths’ own preferences and experiences. This chapter provided insights into the study of youths’ reflective practices, regarding not only their program experiences, but also perhaps their reflective practices in general. For example, findings highlight the fact that youths’ reflective practices are better understood by accounting for specific types of reflective practices (e.g., talking to parents/peers), the degree of engagement in each practice, and youths’ preferences for engaging in certain sets of reflective practices, as shaped by their participant characteristics. These findings also provide key insights into developing effective methods for harnessing self-reflection in service of promoting youths’ autonomous motivation about their program participation. Since findings from Chapter 5 established that youths’ reported level of autonomous motivation is positively associated with several aspects of well-being (i.e., life satisfaction, positive affect, psychological resilience), promoting internalization processes through reflection may further enhance those aspects of adolescent well-being.

## CHAPTER 7

### Conclusions

As noted at the beginning of this paper, all youth have the inherent strengths and capacities to support growth and thriving, but the realization of that potential also depends upon the availability of supports and opportunities that are afforded within the multiple and dynamic contexts in which youth develop (Heckhausen, 1999; Lerner et al., 2005). Organized school activities and community programs have been shown to provide youth with opportunities for promoting development in ways that may not be afforded in other areas of their lives (Mahoney et al., 2005). While some of the short- and long-term benefits of activity participation have been documented (e.g., Fredricks & Eccles, 2008), there is still a need to identify mechanisms of development that explain relations between program participation and youth outcomes, to maximize the benefits of youths' participation through sustained engagement in quality programs (Dawes & Larson, 2011).

Various theories and lines of research, including those related to intentional self-regulation (Lerner et al., 2011) and autonomous motivation (Deci & Ryan, 2002), emphasize the importance of adolescents' as agents of development. While intentional self-regulation has been shown to enhance the benefits of youths' participation in school and community programs (Urban et al., 2011), and autonomous motivation has been linked to increased well-being in adolescents (Soenens et al., 2007), calls have been made to identify the specific features of activity participation that support autonomous motivation, and to explain interindividual differences in these relations (Gestsdottir et al., 2011).

Challenges in developing a coherent and well-integrated self may be even greater for lower-income youth due to factors such as a higher prevalence of harsh punitive parenting (Harter, 2006; Yates et al., 2003), and a lack of other vital



environmental supports (Eccles & Templeton, 2002). Understanding how to effectively design youth programs to promote internalization processes among America's most vulnerable youth is limited by the fact that most findings in the literature on organized activity participation are based on samples of middle-income White youth. Those studies that did examine SES and race did not assess youths' processes of integration and reflective practices (e.g., Fredricks & Eccles, 2008). This study attempted to address these gaps in the literature by assessing relations between activity participation, reflective practices, autonomous motivation, and well-being in this sample of high- and low-SES White and non-White youth.

A visual depiction of the overall results from this investigation is provided in Figure 9. Results from this investigation revealed individual differences in overall participation rates and differences in the characteristics of participants vs. non-participants (Chapter 3). Individual differences in the types of activities youth join, youths' feelings of connectedness to adults in programs, and their participation duration were also highlighted in that chapter. Associations between the 3 key aspects of participation (i.e., activity type, connectedness to adults in programs, and participation duration) and youths' reported level of autonomous motivation were also assessed. In some cases, the moderating effects of participant characteristics were revealed (Chapter 4). Positive significant relations between autonomous motivation and life satisfaction, positive affect, and psychological resilience were then established (Chapter 5). Finally, in Chapter 6, youths' patterns of reflective practices about their program participation were identified, individual differences in those reflective patterns were highlighted, and differences in relations between patterns of reflection about program experiences and autonomous motivation were revealed.

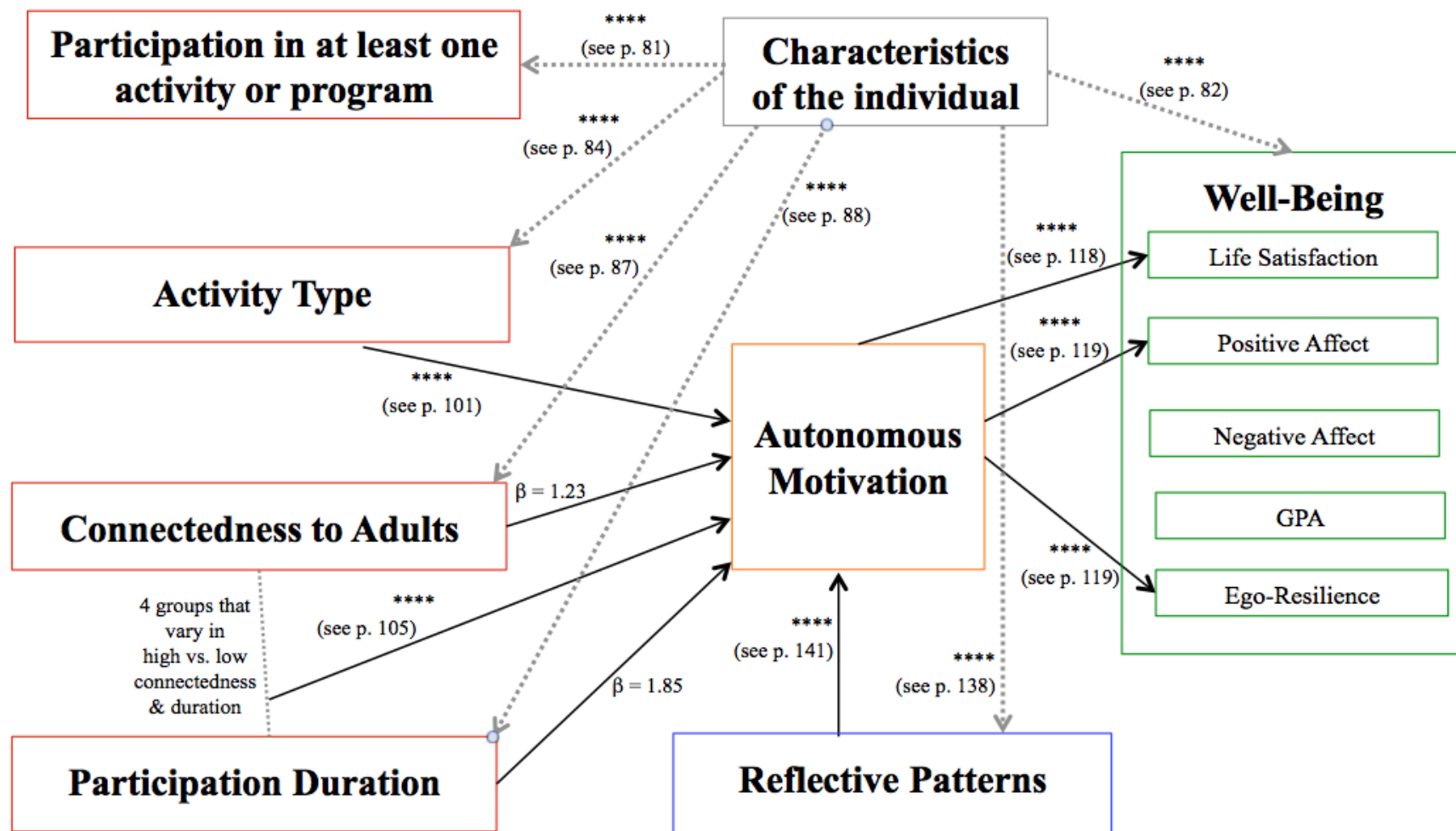


Figure 9. *A Visual Depiction of the Overall Results from this Investigation.*

*The Key Role of Income and Parental Support in Overall Participation Rates*

When assessing disparities in overall participation rates in this sample of adolescents, results revealed that income mattered more than one's ethnicity/race. High SES White youth had the highest overall participation rate, followed by high SES non-White youth. The next highest participation rate was among the low SES non-White youth, with low SES White youth reporting the lowest overall participation rate. Since activity participants are known to report better outcomes across several domains of development, compared to non-participants (Mahoney et al., 2006), policy makers and practitioners should gear their efforts towards providing greater access to programs for low income White youth particularly. Increasing subsidies and scholarships may help to eliminate barriers to participation among the poorest youth. Thus, efforts should also be made to subsidize transportation costs, organize ride-shares, or develop and offer quality activities and programs to encourage participation among low-income White youth. Future work should emulate studies such as the one by Conger and his colleagues (2012) that assessed the effects of activity participation across several generations of lower income rural youth and their families, as well as compare participation rates, program processes, and outcomes across time in diverse contexts (e.g., urban Chicago, rural upstate New York).

Findings also showed high parental support was associated with greater activity participation in this sample of adolescents. Thus, parental involvement in school activities and community programs should be encouraged to not only foster parents' general support for their children, but also as a way to boost youths' activity participation rates, especially among the most vulnerable youth who are likely to benefit the most from their activity participation (Mahoney, 2000). Furthermore, as results from this investigation showed, promoting young people's relationships with

their parents may at the same time benefit their feelings of connectedness with adults in programs, which may then benefit their autonomous motivation and well-being.

*Individual Differences in Key Aspects of Activity Participation and  
Relations With Autonomous Motivation*

Insights gleaned from a literature review assessing what is known about program participation among middle-income White youth, and what is known about program participation among lower-income youth (Ja, 2008b) revealed key features of activity settings that are likely to promote autonomous motivation among lower SES ethnically diverse youth. Three of these aspects of activity participation (i.e., the type of activity youth are engaged in, the extent to which youth feel connected to adults in their activity setting, and their participation duration) and their associations with autonomous motivation were the focus of Chapter 4.

*Individual Differences in Participation in Four Activity Types*

Results of the multinomial logistic regression (MLR) analyses showed that youth choose programs that reinforce those attributes and qualities that they may already have. For example, boys and high SES White youth have significantly greater odds of participating in sports (vs. community/faith-based programs and academic clubs). Girls and those with higher parental support have significantly greater odds of participating in performing and fine arts programs (vs. community/faith-based programs). While self-selecting into programs in which the structure, goals of an activity, and fellow participants may help reinforce and solidify aspects of one's identity (Larson et al., 2006), youths' selection into programs may diminish their exposure to an array of other important experiences (e.g., developing relationships with diverse peers) that may foster the development of new skills, qualities, and identity experiences that support self-exploration and growth (Larson et al., 2006).

While some of the effects of early sports specialization or year-round participation have been documented (e.g., higher stress, less opportunities for fun; Woods, 2011), perhaps youths' early selection and specialization of activities, including, but not limited to sports, should be assessed, and the short- and long-term benefits and drawbacks should be examined. Regarding differences in participation rates by gender, a future study could assess the extent to which youth identify with a stereotypical masculine, stereotypical feminine, or androgynous gender identity. Future studies could also investigate how youth's self-identification influences the types of activities they participate in, as well as youth's perception about the gender roles and expectations associated with a given activity. Since youth who report identifying with a more androgynous gender identity report greater well-being compared to those who identify with a more stereotypical gender identity (Markstrom-Adams, 1989), steps could be made to encourage youth to explore, participate in, and challenge their pre-conceived notions about the activities they would not typically engage in. Doing so may promote diverse learning experiences, and perhaps an androgynous gender perspective which may improve well-being.

#### Activity Type and Autonomous Motivation

Just as important as assessing the types of opportunities of development that are afforded in different types of activities is assessing the extent to which youth internalize reasons for participating in an activity that originate outside the self into the self-system. This is particularly important when considering the density and range of learning experiences youth report while participating in organized activities (Larson et al., 2006). If youth report greater internalization in programs known to afford a high degree of developmental opportunities, they may be experiencing enhanced benefits of their participation. Results revealed significantly different levels of autonomous motivation among youth participating in 4 different activity types. Sports and

performing and fine arts programs emerged as the 2 activity types associated with the highest autonomous motivation for youth in this sample. Specifically, sports participation (boys and high SES White had greater odds of participation in sports) was associated with higher autonomous motivation compared to participation in community/faith-based programs and academic clubs. Since participation in sports has been associated with significantly greater opportunities for developing initiative, emotion regulation, and teamwork, but also more stress (Larson et al., 2006) as well as a higher rate of alcohol use among girls only 2 years after high school (Fredricks & Eccles, 2008), it may be the case that the sports participants in this study who reported high autonomous motivation are internalizing these types of learning experiences into the self-system.

Another result showed performing and fine arts participants (girls and those with high parental support had greater odds of participating in this activity type) reported significantly higher autonomous motivation about their program participation, compared to youth in academic clubs. Since participation in performing and fine arts has been associated with higher rates of opportunities for developing initiative, positive relations with adults, but fewer opportunities for teamwork (Larson et al., 2006), youth in this study who reported high autonomous motivation in performing and fine arts programs may be internalizing a value for initiative and positive relations with adults into their self-system. These results build upon previous findings by demonstrating that while youth report significantly different opportunities for development in various activity types, they also report significantly different levels of internalizing those learning experiences which may maximize or minimize the developmental impact of participating in those programs.

We must also consider issues related to youths' self-selection into programs. Though results from this investigation, based on cross-sectional data, cannot answer

questions of causality, these results can still nonetheless shed some light on this question. There may be something about the nature of sports and performing and fine arts programs that supports autonomous motivation. In the case of sports, it may be a mixture of opportunities for engaging in skill building, as well as setting and achieving goals both as an individual and/or as part of a team, perhaps fostered through encouragement from peers and coaches, that supports self-integration and connection with others. In the case of performing and fine arts programs, it may be playing an individual instrument as part of a symphonic band, acting alongside other young players, or coordinating with costume and set directors to pull off an end-of-the-year theater production, that promotes opportunities for self-integration and social connection as one discovers the satisfaction of contributing to the larger purpose of the collective whole.

It may also be the case that youth with a high capacity for autonomous motivation may select into programs in which other highly motivated youth also participate. Thus, these youth gain from the additional benefits of reciprocal interactions with highly motivated peers. However, this may also be the case for youth who report low autonomous motivation. These youth may select into programs that don't provide supports and opportunities for fostering autonomous motivation (e.g., playing video games in the computer club), or may select into programs where less motivated youth also participate. This suggests that youth who are likely to report low levels of motivation, such as youth with low parental support, should be encouraged to engage in activities or programs rich in opportunities for promoting autonomous motivation, and where highly motivated youth participate. Furthermore, program leaders and teachers should integrate opportunities for promoting autonomous motivation into the goals of the activities.

## Youths' Feelings of Connectedness to Adults in Programs

While relationships with supportive and caring non-parental adults have been highlighted as a key ecological asset that benefits youths' program experiences, processes, and associated outcomes (e.g., Larson, 2006; Whitlock, 2007), it is also important to understand individual differences in youths' reports of connectedness to adults in programs. Results showed girls reported significantly higher connectedness to adults in programs, a finding which is congruent with previous studies showing girls' report higher connectedness than boys in several contexts (e.g., peers, school) (Karcher et al., 2007). Higher parental support was also positively associated with greater connectedness to adults in programs. This builds upon Whitlock's (2007) finding that feeling connected to at least one parent predicts higher community and school connectedness. Surprisingly, there were no significant differences in the 4 SES/race groups' reports of connectedness to adults in programs by the 4 SES/race groups. Karcher and Sass (2010) had found, for example, that African American youth report the lowest level of connectedness to teachers, compared to Latino and White youth.

Results revealed a highly significant positive association between connectedness to adults in programs and autonomous motivation. This provides additional evidence of the benefits that come when youth feel that they, as individuals, are cared for, trusted, and respected by adults, and that they also care for adults in the community and institution (Whitlock, 2007). The use of Whitlock's (2007) connectedness to adults scale provided insight into what it is about the nature of youth-adult relations that benefits youth in programs, highlighting the reciprocal, as well as the individual and collective nature of connectedness. Lerner et al. (2005) pointed out the importance of mutually beneficial reciprocal interactions between self and society, while Self-Determination Theory emphasizes a balance between



autonomy and connection (Deci & Ryan, 2002). This finding is also in line with SDT's Organismic Integration Theory (OIT), from which the Autonomous Motivation subscale is derived, highlighting the role of self-integration and connection with others in supporting the realization of human potential.

### *The Role of Parental Support and Gender*

Two significant interaction terms revealed the moderating effect of parental support and gender in relations between connectedness to adults in programs and autonomous motivation. The first significant interaction term, Connectedness to Adults X Parental Support, showed that regardless of the level of parental support, the more connectedness to adults that youth report, the more autonomous motivation they report. While this result is not surprising in light of Whitlock's (2006, 2007) finding linking a positive relationship with a parent to feelings connected to adults at school or in one's community, this finding highlights the key role of connectedness with program leaders in how autonomously motivated youth are about their program participation.

The use of Whitlock's (2006) scale sheds light on what it is about the nature of adult-youth relationships that may benefit participants' autonomous motivation. Studies using the SDT framework have demonstrated the benefits of support for autonomy from parents and teachers on adolescents' autonomous motivation for school, social competence, and job-seeking behaviors (Soenens & Vansteenkiste, 2006). While the Parental Autonomy-Support Versus Psychological Control scales (e.g., "My mother/father is less friendly to me if I don't see things like he/she does"; Soenens & Vansteenkiste, 2006, p. 593) measure important dimensions of adult-youth relationships and their influence on autonomous motivation, Whitlock's (2006) connectedness to adults scale measures another dimension of youth-adult relationships which includes the extent to which youth feel they are cared for, trusted, and respected

by adults, as individuals, as well as the extent to which they care for adults in the community or institution. Thus, Whitlock's (2006) measure captures a more dynamic and complex picture of youth-adult relations. A future study might map a network of relationships that vary in their level of connectedness within a youth program, identify youth who inspire and foster connectedness within a program, and examine relations between connectedness and autonomous motivation.

This finding also showed that though youth with high parental support do benefit from connectedness to adults in programs in terms of their autonomous motivation, connectedness to adults in programs seemed to matter more for those with low to moderate parental support. Perhaps increasing parental support by providing opportunities for parental involvement in programs may help bolster youths' initial levels of motivation about their participation in programs. For example, the creation of school-based community "living rooms" in Latina and Latino middle schools in which Latino mothers volunteer their time as "othermothers" fostered connectedness, youth-parent relations, and meaningful adult roles (Lopez & Lechuga, 2007). Furthermore, school-based programs have been shown to foster parental involvement which is linked to greater self-regulation, school success, and psychological adjustment among youth (Brody & Flor, 1997). This is particularly important given that studies have found the degree of parental involvement, stimulation, and monitoring is one way the family mediates the link between poverty and youth outcomes, and that disadvantage at the school and individual household level are associated with less school connectedness (McNeely, Nonnemaker, & Blum, 2002).

A second significant interaction term, Connectedness to Adults X Gender, revealed that there is a bit more of an impact of connectedness to adults in programs on autonomous motivation for girls than boys. This result confirmed what Urban et al. (2010) found in a study with lower-income youth – that those with the strongest

capacity for intentional self-regulation benefitted most from their activity participation, and that these relations were strongest for girls.

So, what is it about girls that allows them to draw upon connections to adults in programs that may positively influence their autonomous motivation? While some argue that adolescent girls' desire to develop and maintain relationships (e.g., Brown, 1998) contributes to a "silencing" of one's own needs and desires to please others and avoid conflict (Gilligan, 1982), others have provided evidence that, among girls, experiencing the self as authentic within the context of relationships (i.e., relational authenticity) is an important (and only) predictor of trajectories of self-esteem over the course of adolescent development, even after controlling for body satisfaction, ethnicity, socioeconomic status, educational achievement, pubertal timing (Impett et al., 2008). It is possible that when girls in this study felt connected to adults in programs, as influenced by their selection into that program and reciprocal interactions with peers and adult leaders in the program, they experienced the self as more authentic, and therefore experienced enhanced self-integration and connection with others in the learning context. A future study could tease apart these factors, including interactions between the participant with his/her peers and the program leader(s), as well as the types of activities occurring within programs that may promote voice, personal connection, and authenticity, and assess the contribution of these factors on self-regulative processes.

#### The Role of Participation Duration

Older youth (16-19 year olds) reported significantly higher participation duration than younger youth (13-15 year olds). This may indicate that as youth enter high school, the activity they select into at that time may likely be the same activity they continue to participate in throughout their high school years. A recent study by Bonhert et al. (2013) found youth who initiated participation in organized activities or

continued participation as they transition from middle school to high school report better outcomes (e.g., more friends, decreased internalizing problems). In this study, participation duration was positively associated with autonomous motivation, signifying that longer exposure to the supports and opportunities available in programs is associated with greater internalization of reasons for engaging in a behavior that originated outside the self into the self-system. However, longer participation may also indicate that youth have time to “act upon” the context, shaping the program or activity to fit their needs. It may also indicate that youth have more time to think through and develop a sense of personal connection to the goals of an activity. This is reminiscent of what Dawes and Larson (2011) found regarding youth who developed sources of personal connection to the goals of an activity (e.g., learn something that will benefit them in the future) that is thought to sustain participation. Future research may consider assessing causality among these factors by collecting longitudinal data.

### *The Benefits of Sustained Participation in Programs*

#### *Where Youth Feel Connected to Adults*

Results showed that while both connectedness to adults in programs and participation duration matter when it comes to autonomous motivation, it’s best if participants can experience sustained participation in programs where they feel connected to adults. However, if only one of these assets is available, the benefits of feeling connectedness to adults in programs seemed to outweigh the benefits of participation duration. About 66% of youth in this sample reported above-mean levels of connectedness, and those youth reported significantly higher autonomous motivation compared to those youth who reported below-mean levels of connectedness. High participation duration did seem to provide some benefits to autonomous motivation when connectedness to adults was low, but overall, results show connectedness to adults is the more important asset. These findings may shed

light on Larson's (2009) hypothesis that longer duration may be more important for lower-income youth in that sustained participation must coincide with participation in quality programs characterized by ecological assets such as connections to supportive adults. Future research can examine other key ecological assets that may be important for lower-income youth, and assess the additional benefits of exposure to such assets when participation is sustained over longer periods of time.

#### *Autonomous Motivation and Adolescent Well-Being*

A significant and positive association between autonomous motivation and life satisfaction, positive affect, and psychological resilience were also demonstrated. These results confirmed findings from a study showing positive associations between youths' involvement in activities they think are representative of who they are or want to become and wellness (e.g., Coatsworth et al., 2005). This relates to why the interaction between youths' selection into programs and resources/opportunities afforded in programs may be important to assess in a future study. They also confirmed findings from another study linking activity participation to increased resilience (Fredricks & Eccles, 2008), though results from this study demonstrated these associations in a sample that includes a higher proportion of low SES youth, particularly low SES White youth.

Positive relations between autonomous motivation and life satisfaction, positive affect, and psychological resilience, provide evidence that autonomous motivation may be an underlying mechanism of development that explains relations between activity participation and well-being. More work is needed, however, that draws upon longitudinal data collected from economically and ethnically diverse youth to test autonomous motivation as a potential mediator in the relationship between aspects of participation (including, but not limited to, factors considered in this investigation) and youth outcomes.

### *Youths' Patterns of Reflection about Their Program Experiences*

The final part of this investigation explored adolescents' patterns of reflection about their program experiences, individual differences in these reflective patterns, and relations between those patterns of reflection and autonomous motivation. The hope was that results would provide insight into the ways in which diverse youth are inclined to reflect. Furthermore, results were aimed at learning how to harness youths' capacity for self-reflection to promote greater internalization of the value and goals of an activity.

Sets of reflective practices engaged in by youth that naturally occur in the real-world were identified. Building upon results from the factor analysis that revealed 4 major types of reflective practices that youth engaged in, cluster analysis was employed to explore patterns of reflective practices about program experiences among youth in this sample. Six reflective patterns emerged from the data, patterns that could be characterized by the extent to which youth in that profile engaged in each of the 4 types of reflective practices. While some youth had a more balanced set of practices and others were highly engaged in all forms of reflection, some chose to engage mainly in one form of reflection whether it be talking reflection or thinking reflection. Profiles were also distinguished by who youth chose to reflect with; while some youth preferred talking to teachers/program leaders, others only talked to peers and their parents.

What was interesting is that while each profile differed in their set of reflective practices, they also differed in the participant and family characteristics that were associated with significantly greater odds of membership in that particular profile, compared to other profiles. This was depicted by the results of the multinomial logistic regression analyses. Characteristics of the participants (e.g., gender, parental support) strongly influenced the patterns of engagement in reflective practices.

Also of interest is that those characteristics typically associated with greater adjustment among adolescents (e.g., high parental support) were associated with greater odds of having a more balanced set of reflective practices (i.e., talking and privately thinking). Furthermore, having a more balanced set of reflective practices was associated with significantly higher autonomous motivation, compared to most other groups. Perhaps youth with higher parental support, for example, receive more support and instruction from parents in becoming better equipped with diverse tools for observing and managing their own internal states (Ryan & Connell, 1989).

Though SDT focuses on the source of motivation for engaging in behavior, Eccles and Wigfield (2002) have highlighted the self-regulatory processes that are also involved in motivating behavior. From the perspective of social cognitive theories of self-regulation and motivation (e.g., Zimmerman, 1989), perhaps youth with higher parental support also have overall higher levels of emotion self-regulation which is fostered through warm parenting practices and ample amounts of parental support (Saritaş, Grusec, & Gençö, 2013). Greater emotion self-regulation is indicative of children's higher level executive functioning, such as cognitive control and attention (Carlson & White, 2013), which may facilitate autonomous motivation about one's participation in programs through heightened feelings of personal control and ownership.

Finally, relations between the six patterns of reflective practices and autonomous motivation were examined to see whether certain sets of practices may be more advantageous than other sets of practices when it comes to internalization processes. What stood out was that those who engaged in a more balanced set of reflective practices, both socially connected forms of reflection, especially talking to program leaders/teachers, as well as more private forms of reflection (e.g., thinking about how one's activity relates to personal goals) reported the highest level of

autonomous motivation about their program participation. Findings confirmed the key role of positive adult leaders and teachers in providing youth with opportunities for reflection and drawing out the meaning embedded in their experiences (Larson, 2006). Conversations with program leaders and teachers seemed to provide something that is important to youths' internalization of program goals that conversations with parents and peers do not. Those who talked a lot to parents and peers, but engaged very little in other forms of reflection, reported almost as low of a level of autonomous motivation about their participation, as those who don't reflect at all. Furthermore, engaging in any form of reflection was better than not reflecting at all when it comes to autonomous motivation.

Thus, methods for promoting a balanced set of reflective practices among youth should be encouraged within quality programs to enhance the benefits of participation. Program leaders should encourage youth to engage in various types of reflection to develop a more balanced repertoire of reflective practices. Opportunities for youth to reflect upon their experiences with program leaders and teachers can be fostered by structuring in a time and space for such conversations to occur. Doing so will foster trust, caring, and respect among adults and youth participants, while enhancing autonomous motivation and well-being. The good news is that some youth programs, even large scale programs, build opportunities for promoting self-reflection as a skill among its young participants. The 4-H Youth Development Program at University of California at Davis, places the concept of self-reflection at the core of their program model, and uses Record Books, club-based activities, and leadership development to achieve this objective, though they found that "the largest opportunity for growth through self-reflection is within the context of strong youth-adult partnership" (UC Davis 4-H Youth Development Program, 2014).



### *Limitations of the Current Investigation*

Though the study sample was large ( $n = 1198$ ), the total number of youth attending BHS at the time was 1,600. Thus, roughly 400 students were missing from school, or missing from physical education class during the 3 days in which the school-wide survey was administered. Since one main objective of this investigation was to illuminate the role of economic and ethnic disparities in program participation, those youth who did not complete the survey may likely be the youth who would benefit the most from participation in quality school activities and community programs. It would have been advantageous to follow-up with those students to gather their responses. However, due to the many constraints of this study, including limitations in financial resources, staff, and time, we were unable to collect data from these students.

Though we were still able to collect data from almost 1200 youth attending Binghamton High School, the conclusions and recommendations for practice and policy would have been strengthened if data had also been collected from these 400 youth. Thus, future studies collecting data in high schools where truancy is an issue should build into the design of the study ways to collect data from all youth, especially the most vulnerable youth. Furthermore, while it is theoretically important to understand the role of economic disparities on activity participation, this study was limited by the fact that data was only collected at one site. Thus, to better understand the role of low-income, including the diversity in the nature and context of growing up poor (e.g., rural vs. urban poor), a future study may consider collecting data from multiple diverse contexts (e.g., urban low-income Chicago, urban middle/high-income San Francisco, rural low-income upstate New York, suburban middle-income California).

The original design of this investigation included collecting 14 days of daily diary data from youth about their program experiences, including daily indicators of well-being, daily activity participation, and daily engagement in reflective practices. However, changes made to the school-wide survey after the first half-day of data collection (discussed in Chapter 2) prevented the collection of personal information from 75% of the sample, including participants' names and phone numbers. This identifying information was important for following-up with daily diary participants to promote consistent daily participation in the on-line survey. Compliance has been shown to be challenging in studies with adolescents (Larson & Kleiber, 1993), and these challenges are even greater in daily diary studies which often require a substantial amount of resources (i.e., money, staff) to ensure quality data is gathered (Mehl & Conner, 2013). Thus, while daily diary data was still collected from some of the youth at BHS, inconsistent completion of the daily survey did not allow for the use of these data to assess causal relations among the variables of interest. Thus, findings in this report are based on cross-sectional data, thus limiting the ability to determine causal effects, and limiting the extent to which issues related to self-selection could be accounted for.

The collection of only cross-sectional data also placed limitations on testing a mediational model to determine causality. While all of the factors of interest are inter-related, and there is some evidence showing that the relationship flows from youths' activity participation to autonomous motivation, and then to well-being, there was also reason to believe that part of the relationship flowed in the other direction. Thus, while enough youth activity participants were in the sample to run a model to test mediation, greater confidence in the interpretation of those results would be better achieved with longitudinal data. The ability to make more accurate conclusions about program processes is also limited by this study's reliance on self-report data, and

survey data, more generally. Future studies should consider collecting and triangulating multiple sources of data including survey data from teachers, program leaders, and parents, as well as observational and focus group data.

The use of multinomial logistic regression to identify participant characteristics associated with significantly greater odds of participating in certain activity types or engaging in particular patterns of reflection provided an opportunity to address at least some of these issues. Future studies should collect longitudinal data from an economically and ethnically diverse sample of youth to test autonomous motivation as a mechanism of development linking those aspects of program participation shown in this investigation to be significantly associated with autonomous motivation, and well-being. Assessments using longitudinal data could also provide insights into whether adolescents' engagement in certain sets of reflective practices is sustained over time, and if not, what factors influence those changes, and how do those changes in reflective patterns influence autonomous motivation.

Youth reported on their experiences in the activity they were currently most involved in at the time of data collection (Target Activity). However, that did not mean that youth were not, at the same time or just prior to data collection, participating in one or more other activities. This factor, activity breadth, was calculated based on responses to the activity inventory (Appendix D). However, because the goal of this investigation was to provide a rich picture of the extent to which youths' behaviors are autonomously motivated in the activity in which they participate the most, the investigative lens was focused on those variables most important to autonomous motivation and reflective practices. Furthermore, the financial and time constraints, limitations in the number of undergraduate research staff that could be mobilized, and the normative challenges of collecting data in a large public high school, required the research team to focus on collecting in-depth data on

the activity or program participants were currently most engaged in. The role of activity breadth will be considered in future studies.

In looking ahead towards the development of a future study, one may not only consider the lessons learned in terms of the potential for methodological development, but for conceptual development, as well. Eccles and Wigfield's (2002) review of developmental and educational theories related to children's motivational beliefs, values, and goals provided greater clarity regarding key concepts and theories. Theories varied in whether and how they accounted for individual's expectations for success, reasons for engagement (e.g., intrinsic vs. extrinsic motivation), expectancy and value (e.g., SDT's internalization process), and integration of motivation and cognition (e.g., motivation). There was much overlap in the ideas, perspectives, and even the language used to describe those concepts. However, while recognizing that the growing number of terms (and measures) for similar constructs makes the integration of these theories more challenging, Eccles and Wigfield (2002) highlighted important differences in the concepts, processes, and relationships that allow for a nuanced perspective and viewpoint of human motivation.

In particular, Zimmerman's (1989) social cognitive theory of self-regulation and motivation accounts for "reciprocally related personal, environmental, and behavioral determinants of self-regulated learning that allow individuals to control the extent to which they are self-regulated through personal and behavioral actions and choices" (p. 124). Furthermore, Zimmerman (2000) argues that self-regulated learners use self-regulated strategies (e.g., active learning involving agency and purpose), believe they can perform well, and set several diverse goals for themselves. In addition, Zimmerman (2000) describes 3 types of processes that self-regulated learners engage in: self-observation (i.e., monitoring one's own activities), self-judgment (i.e., evaluating ones' performance in comparison to a standard or to other's performance),

and self-reactions (i.e., reactions to one's performance). Thus, Zimmerman (1989, 2000) provides a multi-faceted framework to study motivation. Such a framework may provide a more complex picture of how adolescents' motivation is inspired, maintained, and promoted in the context of organized activity participation.

Since the development of this study and the collection of data, Vansteenkiste and his colleagues (2009) used cluster analysis as a person-centered approach in the study of adolescents' autonomous vs. controlled reasons for academic achievement. Their findings revealed 4 groups that varied in their autonomous vs. controlled approach to academic achievement. Such an approach allows for greater nuance when it comes to understanding motivation among adolescents in this achievement domain. This was the approach adopted by this study to identify individual differences in patterns of reflection. Thus, a future study may assess individual differences in patterns of motivation among organized activity participants, and examine relations between those patterns and more distal youth outcomes, such as well-being. It would also be interesting to assess individual differences in patterns of reflection among activity participants, introduce interventions that promote a more balanced set of reflective practices, and examine whether those changes in reflective practices have an impact on well-being.

#### *Assessing the Full Picture: Recommendations for Policy and Practice*

Insights gleaned from this investigation provide an observation deck from which to assess in a more holistic fashion, the characteristics of an individual or group of youth, the key ecological assets that can be made available within programs, and the types of reflective practices that can be encouraged among diverse youth. Assessing the full picture provides greater perspective in understanding how to maximize the role of school activities and community programs in promoting autonomous motivation and well-being.

### Encourage Non-Participants to Get Involved

Youth who participate in school activities or programs report better outcomes compared to those not participating in any activity or program (Mahoney, 2000). Results from this study showed that this was also the case for youth at BHS. Thus, youth who are not participating in any school or community activity should be encouraged to participate. It may be advantageous to publish the complete list of activities and programs that are available at school and in the community at the beginning of each school semester, so that youth and their families can remain informed about the available opportunities. Even some teachers at BHS were unaware of the number and range of school activities and community programs that were available for youth at BHS and in the community. Information about scholarships and subsidized participation can also be provided. Thus, in addition to studying barriers to participation, it may also be of interest to encourage youth to explore their interests and select activities and programs that are aligned with their unique strengths, talents, and interests will support the match between the needs of individual adolescents and the opportunities afforded to them by their environment (Eccles et al., 1993). Youth can be encouraged to try new experiences, explore their identities, and eventually find or create a niche where they feel they belong, they feel engaged in, and feel a personal connection with.

### Inspire the Value Parents and Youth Place On Diverse Learning Experiences Afforded in School Activities and Community Programs

Parents' valuing of activity participation, including their preferences for certain types of activities over others, has been found in a qualitative study with primarily lower-income Latino youth and their families to influence youths' involvement in activities (Simpkins et al., 2013). Parents can be provided with details about the types of learning opportunities afforded in individual programs to promote their value for

the activity that a child may be interested in joining. Expectancy-value theory suggests parents' valorization of, and ability to promote their child's expectations for success in a given achievement domain, like organized activities and programs, will increase youths' achievement motivation in that domain (Wigfield & Eccles, 2000).

#### Eliminate Barriers to Participation Among Low Income Youth

Low income youth often report lower activity participation rates (Pederson & Seidman, 2005), and may either join programs with fewer ecological assets, or have limited access to contexts rich in supports and opportunities due to individual- or family-related factors (e.g., financial constraints, lack of support from parents). Efforts should be made to decrease or eliminate barriers to lower income youths' participation in quality programs rich in ecological assets. For example, schools and communities can provide subsidies or scholarships, or can sponsor youth who want to participate in certain programs, but lack the resources to do so. Transportation can be provided for youth, especially for low-income rural youth who live far away from where resources are available, either through family outreach and collaboration, or by situating practices closer to school, so youth can more easily attend practices, games, or performances. This may encourage greater rates of initial entry into programs, as well as sustain participation among low income rural youth.

#### Offer Community-Based Sports for Low SES Non-White Youth, Especially for Girls

Sports participants in this sample tended to be higher SES White youth. Considering that participation in high school sports becomes more competitive as youth get older, the many financial requirements that accompany sports participation, and that girls' participation in sports declines as they move through adolescence (Kimm et al., 2002), more opportunities for participating in sports should be provided for lower SES non-White youth, especially girls. Community-based sport programs seem to be an effective way of encouraging sports participation among youth who

either do not make it onto a high school sports team or lack the financial resources to participate on those teams. Taking another glance at participation rates in individual activities and programs in this sample of adolescents, only 2 girls (vs. 19 boys) were participating in Community Youth Organization (CYO) basketball. This may highlight the need for promoting awareness of community-based sports programs among high school girls, and that more community-based sports programs, in addition to CYO Basketball, should be provided.

#### Foster Ecological Assets and Encourage Integration of Learning Experiences

Participation rates in this sample of adolescents indicated a high degree of stratification by gender and by income. For example, while sports participants were more likely to be higher SES White youth and were more likely to be boys, performing and fine arts participants were more likely to be high SES White youth and were more likely to be girls. Community/faith-based programs and academic clubs were mainly participated in by boys and by lower SES non-White youth. Thus, we should foster core ecological assets such as high connectedness with adults in programs across all programs to ensure that all youth are exposed to key supports and opportunities that are vital to development, especially among those in the greatest need. Considering that youth join programs where other youth who share their attributes participate (e.g., girls tend to join performing and fine arts programs where participants are mainly girls), youth should be encouraged to engage in experiences outside their comfort zone. Research shows that opportunities for exposure to and interactions with a diverse set of peers are key positive developmental experiences reported by youth (Larson et al., 2006).

#### Promote Connectedness with Adults and Sustained Participation in Programs

There is a strong positive relationship between feeling connected to adults in one's program and autonomous motivation, thus, opportunities for promoting respect,



trust, and caring between adults and youth should be fostered. Training positive adult leaders in effective mentoring, for example, may support connectedness. Since feelings of connectedness with parents and connectedness with adults in one's institution and/or community are mutually beneficial (Whitlock, 2007), parents and peers outside a given activity can be encouraged to engage in program goals through outreach or parent-youth collaborations. Including mothers as part of a safe space within programs for lower income ethnically diverse urban girls was found to be an effective way of promoting youth-adult partnerships, connection, and purpose (Leadbeater & Way, 2007).

Since high connectedness to adults in programs and longer participation is positively associated with autonomous motivation, sustained participation in contexts rich in ecological assets, like connectedness to adults, should be promoted at an early age. Younger youth should be encouraged to explore and identify a couple activities or programs they like, and to sustain their participation as they transition into high school. Sustained participation not only predicts having more friends and fewer internalizing behaviors (Bohnert et al., 2013), but can provide youth with continued exposure to supports and opportunities available in quality programs.

#### Foster Well-Being through Increased Internalization of Learning Experiences

Results from this study showed more autonomous motivation and internalization about one's program participation was positively associated with greater life satisfaction, positive affect, and psychological resilience. Therefore, opportunities for youth to make meaning of their experiences in programs and to integrate those experiences into their self-system should be provided and those capacities should be cultivated. Furthermore, we should pay attention to the types of learning experiences youth are internalizing. While various school activities and community programs may share certain ecological assets, such as the presence of a

positive adult leader who encourages connectedness and mutual support, programs may afford certain learning experiences that other programs don't offer. Also, attention should be paid to program quality, so that youth are not exposed to and end up internalizing negative developmental experiences, such as negative inappropriate adult relations that may contribute to youths' general mistrust for non-parental adults (Larson et al., 2006).

#### Promote Internalization By Engaging Youth In A Balanced Set of Reflective Practices

In terms of internalization processes, youth seem to benefit most from engaging in a more balanced set of reflective practices that include discussing their experiences with teachers and programs leaders, as well as spending time privately thinking about their experiences. While parent support may play an important role in foundational levels of autonomous motivation, program leaders' expertise and ability to structure, adapt, and encourage youths' participation in a more nuanced way suggests that while both types of support are important, they may play different roles when it comes to encouraging initial sparks of interest, enhancing the benefits of participation, and sustaining youths' commitment and motivation. Furthermore, while spending a lot of time reflecting, especially while engaged in creative expressive activities, as well as only talking to parents and peers, is not as effective as engaging in a balanced set of reflective practices, it is better to engage in some form of reflection, then to not reflect at all.

#### Inspire Reflection, Especially Among Unreflective Youth

Youth should be encouraged to engage in reflective practices that they are not typically inclined to engage in, while making sure to account for any unintended negative consequences that may be of concern. Providing youth with choice and ideas for how they can engage in their own reflective processes seems key. For example, creative expressive reflection can be encouraged through painting, poetry, theater,

photography, posting pictures of one's art or creative writing on-line, or organizing an exhibit. More socially-connective reflective practices can be encouraged through activities requiring teamwork among peers, or sharing experiences in one-on-one conversations or focus groups with program participants, parent volunteers, and/or program leaders. Considering results show youth with high parental support are more likely to engage in a more balanced, more adaptive reflective pattern, parental support should be fostered through adult-youth collaborations that encourage youth voice, engagement, and purpose perhaps surrounding a project geared towards improving one's school or community.

If program leaders do not have the time, energy, or resources to carry out individualized assessments, programs can be designed in ways to promote a balanced set of reflective practices among all participants. For example, leaders can offer activities that provide quiet reflective time for youth to engage in private thinking, but also encourage the expression of these thoughts through a creative activity also provided by the program. Youth can then be invited to share their creative expressions and private reflections with a collective community of supportive peers and program leaders that has been established as safe, supportive, and encouraging.

## APPENDIX

### Appendix A. Omitted and Edited Items and Scales

#### *Omitted Participant Instructions*

Thank you for participating in the ACE Project!

Your feedback is valuable!

By completing the following questionnaire, you agree to participate in this study.

You have till the end of this period to complete the survey.

Please read instructions carefully, and answer all questions honestly.

There are no right or wrong answers.

Please work by yourself, and remain quiet till the end of the period.

All of your responses are kept confidential.

#### *Omitted Questions Requesting Identifying Information*

Last name \_\_\_\_\_ First name \_\_\_\_\_ Middle Initial \_\_\_\_\_

What is your primary email address? (please write clearly) \_\_\_\_\_

Do you check your email at least once a day (circle)?      Yes      No

Do you have access to the internet at home every night before you go to sleep? Y / N

If you answered “no”, could you find access to internet elsewhere (circle)? Y / N

If not at home, where could you find internet access? \_\_\_\_\_ (e.g., friend’s house)

*Only for purposes having to do with the study*, can you provide us with a phone

number where you can be easily reached? (please write clearly) \_\_\_\_\_

#### *Omitted Items (in bold): Depressive Symptoms Scale (Fredricks & Eccles, 2005)*

How often <i>during the last month</i> have you...	1 Almost never	2	3	4 Sometimes	5	6	7 Almost always
1. Felt so angry that you wanted to smash or break something?							
2. Felt hopeless?							
3. Felt you could not control your temper?							
4. Felt like you don't care anymore?							
5. Felt very sad?							
<b>6. Felt depressed?</b>							
<b>7. Had thoughts of ending your life?</b>							

*Edited Item from Fredricks and Eccles' (2005) Measure of Risk Behaviors*

About how often during the past 6 months did you:

“Get in a fistfight with another child?”

The item was changed to:

“Engage in an act of physical aggression?”

*Omitted Scale: Trait Self-Determination Scale (Sheldon & Deci, 1996)*

<b>At this point in my life...</b> Read the pairs of statements, one pair at a time, and think about which statement within the pair seems more true to you at this point in your life. Indicate the degree to which statement A feels true, relative to the degree that Statement B feels true.		1 Only A feels true	2	3	4	5 Only B feels true
1.	A. I always feel like I choose the things I do. B. I sometimes feel that it's not really me choosing the things I do.					
2.	A. My emotions sometimes seem alien to me. B. My emotions always seem to belong to me.					
3.	A. I choose to do what I have to do. B. I do what I have to, but I don't feel like it is really my choice.					
4.	A. I feel that I am rarely myself. B. I feel like I am always completely myself.					
5.	A. I do what I do because it interests me. B. I do what I do because I have to.					
6.	A. When I accomplish something, I often feel it wasn't really me who did it. B. When I accomplish something, I always feel it's me who did it.					
7.	A. I am free to do whatever I decide to do. B. What I do is often not what I'd choose to do.					
8.	A. My body sometimes feels like a stranger to me. B. My body always feels like me.					
9.	A. I feel pretty free to do whatever I choose to. B. I often do things that I don't choose to do.					
10.	A. Sometimes I look into the mirror and see a stranger. B. When I look into the mirror I see myself.					

Appendix B. School-Wide Survey (Sample 2) Questionnaire with Edited Instructions



The goal of this study is to learn about your participation in school and community activities, and to understand what role these experiences play in your lives. To do so, this survey asks about your activity participation as well as your thoughts, feelings, and behaviors. If you do not participate in any activities, we are still very interested in learning more about you.

While we value any information you can provide us with, participation is voluntary.

All of your responses will be anonymous and are kept confidential. You can skip any questions you don't feel comfortable answering.

By completing the survey, you agree to participate in the study. If you do agree to participate, you are free to withdraw from the study at any time.

ID # \_\_\_\_\_  
(for ACE Staff)

## Appendix C. Measures

### *Activity Participation Variables*

#### Current Participation in An Activity or Program

1 = *Currently participating in an activity or program*

0 = *Not currently participating in an activity or program*

#### Participant's Selection of their Target Activity

“Please select the ONE activity or program you have been most involved in or have spent the most time in since the beginning of this school year.” Write down the name of the activity or program in the provided space \_\_\_\_\_ (e.g., football team).

#### Activity Type (Target Activity)

Participant's Target Activity were assigned to one of the following groups using the following coding system: 1 = *sports*, 2 = *performance and fine arts*, 3 = *academic clubs*, and 4 = *community/faith-based/service programs*.

#### Participation Duration

The duration of youths' participation in their Target Activity was calculated based on each participant's response to the question, “How much experience do you have in this activity (e.g., 1 year, 3 months)?” ( $M = 1.90$ ,  $SD = .86$ ).

#### Connectedness to Adults in One's Target Activity

The Connectedness to Adults in One's Target Activity scale was adapted from Whitlock's (2007) School Connectedness Scale ( $M = 29.40$ ,  $SD = 5.63$ ). The adapted scale contained 7 items using the following 5-point Likert scale: 1 = *strongly disagree*, 2 = *disagree*, 3 = *somewhat agree*, 4 = *agree*, 5 = *strongly agree*. A sum score was used for all analyses. Item 2 was reverse scored.

1. Adults in my activity care about people my age.
2. Adults in my activity don't respect what people my age think.

3. At my activity there is a teacher or some other adult who believes I will be a success.
4. Adults in my activity listen to what I have to say.
5. Adults at my activity push me to do my best.
6. I care about the activity I go to.
7. I trust the adults in my activity.

The Adapted Self-Regulation Questionnaire in Programs Scale (SRQ; Ryan & Connell, 1989) (Short-Version) and the Autonomous Motivation in Programs Subscale

After reading the question, “Why do you participate in your activity or program?” youth were presented with 15 statements that they rated on a 7-point Likert scale from 1 (*not true at all*) to 7 (*very true*). Five subscales measuring degrees of internalization are captured with the full scale with the sum of 3 items making up each subscale. The subscale for which each item corresponds is provided in parentheses following each item. The sum score for the autonomous motivation subscale was used for this study (6 items,  $\alpha = .90$ ) ( $M = 33.14$ ,  $SD = 8.64$ ).

1. For the pleasure of discovering new skills (intrinsic).
2. I’m not sure why I still participate; I don’t seem to be going anywhere with it (amotivation).
3. I would feel awful if I didn’t participate in my activity anymore (introjected).
4. My parents, family, or friends would be mad if I didn’t participate anymore (external).
5. It is a good way to learn new skills (identified).
6. I participate for the pleasure I feel when engaged (intrinsic).
7. I used to have good reasons for participating, but now I ask myself if I should continue doing it (amotivated).
8. I would feel bad about myself if I was not participating (introjected).



9. I think participating in my activity is a useful way to learn skills (identified).
10. My parents, other family members, or friends tell me to do it (external).
11. It is absolutely necessary for me to participate to feel good about myself (introjected).
12. It is not clear to me anymore; I don't really think this activity is for me (amotivated).
13. My parents or other family members give me money or other rewards when I do it (external).
14. I participate for the excitement I feel when really involved in my activity (intrinsic).
15. I learn valuable lessons from participating in my activity (identified).

#### *Adolescent Well-Being Variables*

##### Satisfaction with Life Scale (Diener et al., 1985)

Satisfaction with life was measured with 5-items using a 7-point Likert scale with the following options: 1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *neither agree nor disagree*, 5 = *slightly agree*, 6 = *agree*, 7 = *strongly agree*. The sum score of all 5 items was used for all analyses (5 items,  $\alpha = 0.87$ ) ( $M = 25.38$ ,  $SD = 6.85$ ).

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I've gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

##### Positive and Negative Affect Schedule (PANAS; Watson et al., 1988).

The PANAS consists of 10 positive and 10 negative affective states. After reading the statement, "The following is a list of words describing different feelings

and emotions. Read each item and then mark the appropriate answer in the space next to that word, indicating to what extent *you feel this way TODAY*. Use the following scale to record your answers.” The following 5-point scale was provided: 1 = *very slightly or not at all*, 2 = *a little*, 3 = *moderately*, 4 = *quite a bit*, 5 = *extremely*.

Positive affect included: inspired, excited, determined, enthusiastic, and alert.

Negative affect included: distressed, upset, scared, nervous, and afraid. Responses were summed to create 2 scale scores: positive affect (5 items,  $\alpha = 0.84$ ;  $M = 13.59$ ,  $SD = 5.80$ ) and negative affect (5 items,  $\alpha = 0.75$ ), ( $M = 7.63$ ,  $SD = 3.51$ ).

Ego-Resilience Scale (Block & Kremen, 1996)

The scale consists of 14 items on the following 4-point Likert scale: 1 = *doesn't apply at all*, 2 = *applies slightly*, 3 = *applies somewhat*, 4 = *strongly agree*.

Responses to the 14 items were summed (14 items,  $\alpha = 0.84$ ) ( $M = 43.30$ ,  $SD = 7.04$ ).

1. I am generous with my friends.
2. I quickly get over and recover from being startled.
3. I enjoy dealing with new situations.
4. When I try to get people to like me, I usually succeed.
5. I enjoy trying new foods I have never tasted before.
6. I am regarded as a very energetic person.
7. I like to take different paths to familiar places.
8. I am more curious than most people.
9. Most of the people I meet are likeable.
10. I usually think carefully about something before acting.
11. I like to do new and different things.
12. My daily life is full of things that keep me interested.
13. I would be willing to describe myself as a pretty “strong” personality.
14. I get over my anger at someone reasonably quickly.

### *Participant Variables*

#### Parental Support (Conger et al., 1986)

The 6-item measure of parental support was adopted from the Iowa Youth and Families Inventory (Conger et al., 1986). Participants read the following statement, “In the past month, how often did your parent or guardian...” and then responded to the following statements on a 5-point Likert scale (1 = *never*, 2 = *rarely*, 3 = *sometimes*, 4 = *often*, 5 = *always*). An additive sum score was used for this measure (6 items,  $\alpha = 0.93$ ) ( $M = 22.44$ ,  $SD = 6.19$ ).

1. Listen carefully to your point of view?
2. Let you know they really care about you?
3. Talk to you about things going on in your life?
4. Talk to you about things bothering you?
5. Give you a voice in decisions?
6. Show approval, trust, and caring toward you?

#### Youths’ Reflective Practices about Program Experiences

The biographical practices scale used in Habermas and DeSilveira’s (2008) paper was adapted to measure youths’ reflective practices about their program experiences. Items were edited and some new items were added based on pilot work conducted with Cornell undergraduate students and high school students at New Roots School in Ithaca. The final scale included 9-items measured using a 9-point Likert scale from 1 = *never* to 9 = *very often*. Youth were presented with the following statement, “Sometimes I reflect about my after-school activity experiences in the following way...” and then responded to the following items:

1. Talk to my parents or family members.
2. Talk to my friends or peers.
3. Talk to program leaders (like coaches or mentors).

4. Talk to my teachers.
5. Write in my diary.
6. Create poetry, create art, or engage in other expressive activities.
7. Share or post my activity experiences on-line (e.g., blog, webpage).
8. Spend time privately thinking about my activity experiences.
9. Think about how my activity experiences relate to my goals.

## Appendix D. School and Community Program Participation Inventory

### Your after-school school & community program participation...

The following is a list of after-school activities and community programs that take place on school days between 2:45 pm and the time you get home, and sometimes during your lunch time and on the weekend. **This list refers to structured, adult-supervised youth activities which typically involve building skills.** These include, for example, school clubs (Art Club, Spanish Club) or school programs (Gear Up), school or community sports, cheerleading, or dance teams, community programs (YMCA, Upward Bound), group or individual lessons (music), or paid/unpaid work.

Please check all activities you have participated in **during the past 3 years** (Box A) or **currently participate in** (Box B). **For each Box A or Box B you check, answer the questions in Boxes C – E.**

ACTIVITY CATEGORY	A Check box if you have participated in this activity in the <b><i>last 3 years</i></b>	B Check box if you are <b><i>currently participating</i></b> in this activity	C Check if you participate during the <b><i>school year</i></b>	D Check if you participate during the <b><i>Summer</i></b>	E How much <b><i>total</i></b> experience do you have in this activity? ( <b><i>eg., 1 year, 3 months</i></b> )
<b>SPORTS</b>					
Baseball team (school)					
Basketball team (school)					
Basketball (CYO)					
Binghamton Athletes Care					
Bowling					
Cheerleading					
Cross-country					
Dance Company – Willow Dance					
Dance team (STEP)					
Dance team (Tazama)					
Football team (school)					
Hockey					
Lacrosse					
Ski club					
Soccer team (school)					
Softball (school)					
Swim team (school)					
Swimming (outside school)					
Tennis					
Track					
Varsity B					
Volleyball					
Wrestling					
<b>Other?</b>					
<b>PERFORMANCE &amp; FINE ARTS</b>					
Anime Club					
Art club					
Band					
Chorus					
Dance Club – Dancers					
Dancers Anonymous					
Drama					

EPAC (Endicott Performing Arts Center)					
Literary Club					
Marching band					
Music Writing					
Orchestra					
Poetry Club					
Theater Production					
Writers Guild					
<b>Other?</b>					
<b>ACADEMIC CLUBS &amp; ORG.</b>					
Academy					
Bible club					
Binghamton Athlete club					
Booster club					
Chess club					
Color Guard					
Computer club					
Debate Society					
French club					
Future Teachers					
Gay-Straight Alliance					
Gear Up					
Honor Society					
Math Honor Society					
Mathletes – ATPAC					
Mock Trial					
Model UN Club					
Multicultural Club					
Odyssey of the Mind					
P.T.A					
Patriots Putting a Stop on Smoking					
SADD					
Science Olympiad					
Sigma Phi Greek Club					
Ski club					
Spanish club					
Student council					
Technology club					
Urban League					
Yearbook					
Youth & government					
<b>Other?</b>					
<b>COMMUNITY ORIENTED</b>					
Big Brothers/Big Sisters					
Boys & Girls Club					
Broome County Gang Prevention					
City Project					
Family & Consumers Science Educ.					
Future Business Leaders of America					

Junior Achievers					
Liberty Partnership					
ROTC					
Scouts					
Summer Employment					
Summer Fun Program					
Upward Bound					
Urban League					
YMCA					
<b>Other?</b>					
<b>SERVICE</b>					
Civic club					
Community service					
Environmental club					
Faith-based service					
Interact club					
Key club					
Volunteering					
<b>Other?</b>					
<b>FAITH-BASED YOUTH GROUPS</b>					
Jewish Community Center					
Peer counseling					
Religious Program					
The Haven					
Tutoring					
Writing center					
Youth group					
<b>Other?</b>					
<b>WORK</b>					
Paid work _____ (name)					
Internship _____ (name)					
<b>Other?</b>					

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